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JPRS-TTP-85-023

2 October 1985

Worldwide Report

# TELECOMMUNICATIONS POLICY, RESEARCH, AND DEVELOPMENT

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2 October 1985

# WORLDWIDE REPORT

## TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

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WORLDWIDE AFFAIRS

NONALIGNED NEWS AGENCIES' POOL COMMITTEE LAUNCHES ECOPOOL

LD091809 Tunis TAP in French 1300 GMT 9 Aug 85

[Text] Tunis, 9 Aug (TAO)--The followup pool committee for the news agencies of the nonaligned countries, which includes Yugoslavia, India, Egypt, Cuba, Indonesia and Tunisia, was held at the TAP headquarters. The meeting was chaired by Mr Bechir Toual, chairman and director general of the agency and current chairman of the news agencies pool of the nonaligned countries.

Among the subjects debated during the meeting were:

- the launching of Ecopool
- progress in training and recycling,
- and relations with UNESCO.

Following an indepth study of the Ecopool project, planned in Belgrade, the committee decided to launch an economic news transmission called Ecopool.

The member countries of the followup committee undertook to start this transmission on 1 September 1985, and called on other agencies that are pool members to join them by including economic news in their pool service labeled Ecopool.

Finally, the meeting approved the proposal of the PRENSA LATINA agency to organize in Havana in March 1986 meetings of the followup committee, the coordination committee and the fourth general assembly of the pool of nonaligned countries' news agencies.

CSO: 5500/4610

AUSTRALIA

# FIRST PRIVATELY OWNED SATELLITE COMMUNICATIONS NETWORK STARTS

Port Moresby PAPUA NEW GUINEA POST COURIER in English 16 Aug 85 p 17

[Text]

**SYDNEY: Australia's first privately owned satellite communications network became a reality yesterday.**

A multi-million dollar contract has been signed between the news agency AAP and the satellite authority, AUSSAT.

The seven-year contract, settled at an undisclosed price, is for the lease of a transponder in the national beam on one of the two domestic satellites to be launched by NASA this year.

An AUSSAT spokesman said the base price of leasing an equivalent transponder is \$2.1 million each year.

The space shuttle Discovery will launch the first satellite on August 24 and the one carrying AAP's transponder in November.

AAP chief executive Lee Casey said the contract opened the way for both improved access by regional centres to current services and a greater variety of news, financial information and "thoroughbred" racing data services.

The high cost of such a venture had made these only available in mainland capital cities, he said.

Mr Casey said AAP expected the network to operate by April, 1986, and to grow to more than 1000 stations within five years.

CSO: 5500/4350

HONG KONG

## COMPUTER SOCIETY HOLDS REGIONAL MEETING IN HONG KONG

Hong Kong SOUTH CHINA MORNING POST in English 28 Aug 85 Supplement p 3

[Article by Peter Robinson]

[Text]

The Institute of Electrical and Electronics Engineers (IEEE) Computer Society has taken a major step towards pooling resources to strengthen computing expertise in the region.

The main objective is to develop technology transfer between countries and encourage greater liaison between companies in the computing field.

At the end of the Computer Society's first Asia-Pacific region meeting yesterday, chairman Mr Anthony Pau said it had passed a resolution which "should lead to members throughout the region working together as a unit for the first time; and represents a milestone for regional co-operation."

Mr Pau said that compared with other regions, there has been little technological development done here.

"We must identify high-technology products so that we are not fooled by other countries into buying inferior products," he said.

The society aims to create better liaison between its member countries so that it can pass on its knowledge of the latest developments in computing to local companies.

This will involve establishing a network providing rapid communication between member countries on the latest advances.

Mr Pau emphasised the resolution did not represent a "one-shot deal — we have formalised an administrative structure and will be setting up a task force to oversee the carrying out of the resolution; to generate revenues and to interface with the industry."

Asked why it has taken so long to co-ordinate such an effort, he said growth in the region has been fast and countries here have been willing to leave the development of information technology to others.

The only way lesser developed countries could compete would be to pool their resources, he said.

He was confident that companies would be prepared to co-operate rather than regard their information as secret.

Yesterday's resolution also calls for starting up a newsletter, library, and information bank of computer professionals, and the provision of training programmes.

Training schemes will be modelled on government-sponsored courses in Singapore, which has taken an early lead in the region in developing such programmes.

Mr Pau said: "There could be a shortage of computer professionals in Hongkong because we did not make any

plan for the growth of the industry as in Singapore."

He said the IEEE would be able to inform the Hongkong Government about manpower needs in the industry through its representation on the Vocational Training Council.

"Never before in this region have gathered so many country representatives of the computer profession under one roof to discuss regional development of computer applications," he said.

"This milestone event will light up the opportunities of regional co-operation which we have been expecting for a long time."

Countries attending the meeting include Australia, India, Indonesia, Japan, Korea, Malaysia, New Zealand, Pakistan, the Philippines, Singapore, Sri Lanka and Thailand.

The IEEE, which last year celebrated its centenary, is the world's largest professional engineering society and has over 270,000 members worldwide. In Hongkong it has about 2,000 members.

Mr Pau, who was born in Hongkong and educated abroad, is the first Asian to be appointed Asia-Pacific region chairman of the Computer Society.

He is also chairman of a local company, Computer Engineering Technology Systems, which recently has been involved in developing low-cost Chinese software programs and industrial robotics.

CSO: 5550/0161

HONG KONG

# TELEPHONE COMPANY STUDYING INTERNATIONAL STANDARD

Hong Kong SOUTH CHINA MORNING POST in English 8 Aug 85 Supplement p 2

[Article by Peter Robinson]

[Text]

Hongkong Telephone Co Ltd (Telco) is studying a new international communications standard, known as the X.400, which will enable computer users worldwide, regardless of the make of their system, to transmit and receive text and graphics over telephone networks.

Incompatibility in various computer systems has been one of the industry's main bugbears and a hindrance to the integration of different computer systems through the telecommunications network.

In December, the standard was approved by the Paris-based International Telecommunications and Telegraph Consultative Committee, and computer companies are racing to develop prototypes for the X.400.

A Telco spokesman said that all governments are represented on the committee, with Hongkong represented by the UK.

The X.400 was a major topic for speeches at today's opening of the Wang Fair and Conference.

Wang Laboratories Inc's senior network architecture consultant, Dr Joseph St Amand, said that the X.400 was likely to become opera-

tional by 1987 and would revolutionise the transmission of text. Transmitting text would be as simple as using the telephone, he added.

He said that three European computer companies, Bull, ICL and Siemens, had already developed software prototypes for the X.400 and would be displaying these at the Paris computer fair, SICOB, in November.

Dr Amand said the X.400 was unique in that it would cross country and vendor lines and facilitate mixed mode transmissions of text, graphics, voice and data.

Since the system is software based it would be possible to use it with existing hardware. Even personal computers will be able to link up to telephone networks, allowing the system to be used just as well at home as in the office.

Apart from evaluation from major computer companies, the X.400 will also require detailed evaluation from telephone networks. Telephone companies would have to consider the question of tariffs.

The three-day Wang Fair and Conference, which has become an annual event, was opened yesterday by the acting Secretary for Administra-

tive Services and Information, Mr Adolf Hsu.

In his opening speech he announced that "within the civil service, over 90 per cent of departments are using computer-based automatic office equipment of one kind or another."

He said that applications range from the production of identity cards, and taxation computation to the registration of voters for the forthcoming Legislative Council elections.

He said that the Government also plans to prepare pupils for the computer age by introducing microcomputers into all secondary public schools.

Mr Hsu said Hongkong spent \$2.1 billion on computer equipment last year, 10 times that of five years ago.

Hongkong also has the highest density of automatic teller machines in the world, he added.

The Wang Exhibition and Conference is organised by Wang Pacific Ltd, the local subsidiary of US-based, Wang Laboratories Inc.

The vice-president for the Asia area, Mr Edward Yang, said that the group's operations here are growing at an annual rate of about 45 per cent.

CSO: 5550/0157

JAPAN

U.S. TRADE REPRESENTATIVE, MPT OFFICIAL DISCUSS TELECOMMUNICATIONS

OW121301 Tokyo KYODO in English 1134 GMT 12 Aug 85

[Text] Tokyo, Aug. 12 KYODO -- Visiting U.S. Trade Representative Clayton Yeutter Monday expressed hope that Japan will continue its market-opening effort in the telecommunications equipment field. In his meeting with Moriya Koyama, vice minister of posts and telecommunications, Yeutter accordingly urged Japan to open its market to foreign wireless equipment, including automobile phones. He warned of persistent disgruntlement within the U.S. Congress, saying deliberations there on retaliatory legislation against Japan might be stepped up in September.

In reply, Koyama said Japan is doing the best it can to open the market, and requested U.S. understanding for its efforts. Earlier in the day, Yeutter paid a courtesy call to Hisashi Shinto, president of Nippon Telegraph and Telephone Corp. (NTT) to discuss NTT's equipment procurement from U.S. firms. Shinto told Yeutter that U.S. telecommunications companies have acted positively in meeting Japan's technical requirements.

In another meeting, Yeutter met Tomomitsu Oba, vice finance minister for international affairs, and other officials. There, he praised Japan's efforts to liberalize its capital and financial market as agreed in last June's bilateral government consultations. Oba said such liberalization will lead to development of Japan's financial market as well as to strengthening of the yen's exchange value in the long term.

Yeutter also asked the Finance Ministry to help U.S. tobacco makers increase their market share in Japan and to see to it that All Nippon Airways (ANA) buys American Boeing aircraft.

CSO: 5560/72

JAPAN

## TRADE NEGOTIATIONS WITH U.S. FOCUS ON TELECOMMUNICATIONS

OW240357 Tokyo KYODO in English 0330 GMT 24 Aug 85

[Text] Koloa, Hawaii, Aug. 23 KYODO -- Japan Friday promised to speed up studies on U.S. requests concerning liberalization of the Japanese market for mobile telephones and other wireless telecommunications systems, Japanese Government sources here said. Japan will ask an advisory panel of the Ministry of Posts and Telecommunications to work out by yearend an interim report on the possible adoption of the U.S.-style car telephone system in Japan. The advisory council had previously been expected to make a final proposal on the issue next April.

The promise was made during the last day of intensive subcabinet-level market-oriented sector-selective (MOSS) trade negotiations between Japan and the U.S., the latest in a series which started in February this year. Japan told the U.S. that it will also speed up reviews on technical standards for wireless telecommunications equipment with the aim of solving the issue by the end of this year. The two countries, to this effect, agreed to hold the next subcabinet-level meeting in October and an experts' meeting in September to discuss technical matters.

Telecommunications was one of the four areas discussed during the latest round of the MOSS talks, which are aimed at soothing bilateral trade friction. Other areas are electronics, forestry products and pharmaceuticals and medical equipment. Japan explained the market-opening measures it has taken since the February MOSS meeting, while the U.S. delegation said the U.S. telecommunications industry rates the Japanese efforts highly, the sources said.

Japan also promised the U.S. that it will quickly draw up its conclusions on the planned easing of standards for selecting enterprises seeking to enter Japan's new type of communication service called VAN (Value Added Network). VAN services, eyed by many foreign communications companies as a promising field for sales in Japan, allow different types of computers to communicate.

On automobile phones, the U.S. has asked Japan to permit the use of the U.S. system which is designed for communications in different-sized zones to the Japanese system, apparently hoping to sell U.S. products without major adjustments.

CSO: 5560/075

JAPAN

NEC UNVEILS PLAN TO EASE TRADE FRICTION

OW270735 Tokyo KYODO in English 0645 GMT 27 Aug 85

[Text] Tokyo, 27 Aug (KYODO)--NEC Corp said Tuesday it has worked out its own "action program" to further increase its production in the United States and to raise the value of its annual imports, mainly from the U.S., to 200 billion yen. The company has already said it will boost the locally-made share of its sales in the U.S. in fiscal 1985, ending next March, to 30 percent, and Tuesday's announcement said this figure will be raised to 50 percent in one or two years.

An NEC official said the plan is aimed at helping to ease trade friction between Japan and the U.S. as part of the company's global business strategy envisaging diversification of production points worldwide. The program involves adding the capability to make car phones at its plant in Portland, Oregon, which produces optical fiber and microwave communications equipment. The car phone facilities are scheduled to be completed by the end of this September, with production starting next April, he said. Their installation will complete an entire process from automatic mounting of semiconductors on printed circuit boards to automatic inspection of products at the final stage, the official said.

Some 20,000 car phones will be made in the initial year and 100,000 by 1989. Investment in the facilities will reach 6 million dollars, the official said, bringing total investment in the Portland plant to 31 million dollars. Some 85 percent of total investment will be locally procured, the official said. The company also plans to convert its Los Angeles plant, which inspects 1,500 car phones a month, to an assembly and maintenance plant, the official added.

It is also considering establishing production facilities for video tape recorders in its Atlanta, Georgia, plant, which started production of color television sets in July. The Georgia plant may also make projection televisions with large screens and other special televisions suitable for the new media.

CSO: 5560/076

JAPAN

# GOVERNMENT SOURCES VIEW GENEVA ITU MEETING

OW060217 Tokyo KYODO in English 0005 GMT 6 Aug 85

[Text] Tokyo, 6 Aug KYODO--The International Telecommunications Union (ITU) will begin a meeting of its member countries' radio regulatory agencies in Geneva Thursday to discuss allocation of communications satellite orbits and frequencies among developing countries, government sources said Tuesday.

They said developed nations will probably put forward a compromise plan for allotting part of the "C band" (four to eight gigahertz) to developing countries. Chances are that developing countries, although dissatisfied with the developed countries' virtual monopoly of satellite communications, will accept the proposal because they have no counterproposal, the sources said.

Most of the ITU's 160 member countries will be represented at the three-day meeting. Almost all of about 200 communications satellites orbiting the earth have been launched by developed countries. Developing countries, concerned that there might be no room left for them in satellite communications, are expected to demand concessions at the Geneva meeting.

The "C band" is most commonly used for communications satellites. But the "KU" and "KA" bands of higher frequencies are now being developed. The "C band" could therefore be partly allotted to developing countries, with no problem for developed countries' satellite communications systems.

The Posts and Telecommunications Ministry said that Japan's satellite communications are already conducted mainly on the "KU" and "KA" bands.

If broad agreement is reached on orbit and frequency allocation at the Geneva session, experts from the member countries will study a specific plan for formal approval at a conference of radio regulatory agencies in three years, the sources said.

CSO: 5560/067

JAPAN

JAN-JUN REPORT SHOWS TELECOMMUNICATIONS INDUSTRY SLOWING

OW290509 Tokyo KYODO in English 0403 GMT 29 Aug 85

[Text] Tokyo, Aug. 29 KYODO -- Japan's orders, production and exports of telecommunications equipment in the first half of 1985 showed a substantial slowdown mainly due to sluggish exports to the United States, the Communications Industries Association of Japan said Thursday.

Total orders received by Japan's major telecommunications equipment producers in the first six months totaled 947.7 billion yen, up 9.7 percent from a year earlier, compared with 35.5 percent growth in the corresponding period in 1984, the association said. Orders from overseas showed a 7.4 percent drop in the January-June period against a 71.9 percent advance a year earlier, while domestic orders grew 19.3 percent to 658.8 billion yen, a slightly lower growth-rate than last year. Total production rose 14 percent to 866.6 billion yen, compared with (721.1) percent growth in the same period last year.

Exports, of which shipments to the U.S. usually account for nearly half, amounted to 306.1 billion yen, up 20.9 percent against 29.5 percent growth a year earlier. Exports to the U.S., which showed a hefty 91.5 percent increase in the corresponding half year period in 1984, rose 13.8 percent. Association officials attributed the slower half-year growth in exports to the U.S. in reaction to an unusually high level of exports a year earlier. Imports totaled 18.5 billion yen, up 17 percent, compared with 37.4 percent growth in the first six-month period last year.

CSO: 5560/077

JAPAN

## OPENING OF WIRELESS TELECOMMUNICATIONS EQUIPMENT MARKET URGED

OWO41127 Tokyo KYODO in English 1121 GMT 4 Sep 85

[Text] Tokyo, 4 Sep KYODO -- A senior official of the Electroindustries Association (EIA) of the United States said Wednesday his association wants Japan to open its market for wireless telecommunications equipment such as car phones.

John J. McDonnel, vice president of the information and telecommunications technologies group of EIA, said EIA would like favorable treatment given to wireless equipment to the same degree as that now being accorded to telecommunications terminal equipment, such as telephones in Japan. McDonnel represented EIA at the second round of U.S.-Japan industry level talks with the Communication Industries Association of Japan (CIAJ) and the Electronic Industries Association of Japan (EIAJ) held Tuesday in Tokyo.

McDonnel said that currently in Japan, the Nippon Telegraph and Telephone Corp (NTT) is the only provider of public mobile communication services.

The EIA is hoping that Japan's radio wave law will be revised and other types of carriers in Japan will be allowed to offer mobile wireless communication services to increase the market access of American radio wave equipment makers, he said.

McDonnel said that translation of Japanese documents is now in progress and the U.S. Government will be ready to negotiate with Japan on the issue in late October or early November. New Japanese standards on wireless equipment should be close to North American standards as Japan will gain a very significant technical advantage by doing this, he said.

McDonnel said renewal of NTT's procurement agreement on American products, which expires the end of this year, will also be negotiated as the next pending telecommunication issue between the two countries. He said the EIA wants NTT to agree to allocate a certain percentage of its procurement to U.S. companies but there is no indication NTT will agree to this.

He said his association is quite satisfied at least on paper with results of telecommunications talks with Japan up to the present. But only tangible measurable results will be called successful negotiations by the industry, he

said. McDonnel was the first industry association executive to appear before the Senate to support the bills aimed at restricting Japanese exports to the U.S., presented by Senator John Danforth of Montana. He said the Danforth telecommunication bill is not a protectionist bill but it tries to give the administration the power to open up telecommunications markets through bilateral negotiations with various countries, including Canada or European nations. Japan is the only country at present holding bilateral telecommunications market talks with the U.S.

CSO: 5560/087

JAPAN

# NTT TO SET UP INTERNATIONAL BUSINESS FIRMS

OW280227 Tokyo KYODO in English 0215 GMT 28 Aug 85

[Text] Tokyo, 28 Aug KYODO-- Nippon Telegraph and Telephone Corp. (NTT) is to embark on full-scale construction of telecommunications networks for the international market, NTT officials said Wednesday. The officials said the project will involve the establishment of a new company, to be run jointly with 13 Japanese trading houses and engineering firms.

The new company, named "NTT International," (NTT-I) will be set up around mid-October. It will be capitalized at 3 billion yen, of which 50 percent will be owned by NTT and the remainder by the other companies. Koji Maeda, NTT executive vice president, will assume the presidency, the officials said.

The partners consist of 10 trading houses including Mitsubishi Corp., Nitsui and Co, Sumitomo Corp, Nissho Iwai Corp and Toko Bussan Ltd, and three engineering firms -- JGC Corp, Chiyodo Chemical Engineering and Construction Co and Toyo Engineering Corp.

Announcing the list of partners, Junichi Asakura, a member of the NTT new business project team, pointed out that telecom manufacturers are excluded from the partnership. Since denationalization in April, NTT has established eight subsidiaries, 100 percent owned or joint ventures, including NTT Leased Co, its first new venture, to lease or sell NTT equipment such as telephones.

NTT-I will aim to do 20-30 billion yen, worth of business in its first year and about 50 billion yen after three years, according to Asakura. Since privatization, NTT has already received orders from China for construction of optical-fiber transmission lines near Beijing and from Brunei for renetworking of government computers, he said, adding that NTT will make utmost efforts to win orders for data-communications networks, mainly from developing countries in Asia.

CSO: 5560/082

JAPAN

**SATELLITE CONSORTIUM GETS Y65.1 BILLION LOAN**

**OW230757 Tokyo KYODO in English 0749 GMT 23 Aug 85**

[Text] Tokyo, 23 Aug (KYODO)--A consortium of Export-Import Bank of Japan (Exim Bank) and private Japanese banks have decided to extend a total of 65.1 billion yen to Japan Communications Satellite Co to help the company import and launch satellites made by Hughes Communications Corp of the United States, an Exim Bank spokesman said.

Of the total, 45.6 billion yen will be extended by Exim Bank at a yearly interest rate of 6.8 percent, and the rest by the 14 private banks with Dai-ichi Kangyo Bank acting as lead-manager at an interest rate of 7.1 percent, 0.1 percent below the current long-term prime lending rate.

The company was established in February this year by C. Itoh and Co, Mitsui and Co and Hughes Communications Corp, a wholly-owned subsidiary of Hughes Aircraft Corp of the United States.

Included in the 10-year loan is Mitsubishi Bank, which belongs to the Mitsubishi Group that set up Space Communications Corp with Ford Aerospace and Communications Corp of the U.S. to launch Ford Satellite. Among other banks are Mitsui Bank and Bank of Tokyo.

CSO: 5560/074

JAPAN

BRIEFS

OPTOELECTRONIC INTEGRATED CIRCUIT--Tokyo, 4 Sep KYODO--Nippon Telegraph and Telephone Corp (NTT) said Wednesday it has developed an optoelectronic integrated circuit (OEIC) with a monolithic structure. The OEIC called a "monolithically integrated optoelectronic device," has been test-manufactured by a research team of NTT's Atsugi laboratory. The device incorporates a photosensor, which detects the presence of light and emits a signal indicating that light has been sensed, two amplifiers and a light-emitting device (laser diode) on a tiny semi-insulated indium-phosphorus substrate, a senior researcher said. The researcher, who wished to remain anonymous, said the OEIC is 1.2 mm wide and 0.3 mm long. It can sense optical signals, convert them into electrical signals, amplify them and reconvert them back into optical signals and emitting them. The researcher said the development of a transistor that has a structure like "piles driven into the ground" made it possible to integrate complicated electronic circuits on a very small chip. The new device may replace existing expensive and large repeaters (a device for strengthening electrical signals) for optical fiber cables after some improvement, he said. If everything goes well, the new OEIC could be used as basic components of an optical computer of the future, he said. [Text]  
[Tokyo KYODO in English 0901 GMT 4 Sep 85 OW]

'BS-3' BROADCAST SATELLITE--Tokyo, 3 Sep KYODO--The National Space Development Agency of Japan (NASDA) has informally decided to nominate NEC Corp as the main contractor for its next broadcast satellite "BS-3," to be launched in 1990, officials said Tuesday. With this "decision," NEC will have a leg up on its rival Toshiba Corp., as the company will dominate two of the three satellite categories, broadcast and weather satellites. Telecommunications satellites will be led by Mitsubishi Electric Corp. NASDA based its decision on the failure of two of the three foreign-made transponders mounted on its first practical broadcast satellite "Yuri-2a" launched in January last year by Toshiba. NEC has high quality transponders which, NASDA thinks, would be highly compatible with a mainframe satellite patterned after an American RCA Corp telecommunications satellite. NEC has also accepted NASDA's proposal of an incentive contract system, by which either penalty or "bonus" payments will be given depending on the "effectiveness" of the transponders during the four years after the satellite is launched, the officials said. BS-3 will be slightly larger than Yuri-2a and Yuri-2b and weigh 550 kilograms, with three channels expected to be available for commercial broadcasting over a "life-span" of seven years. [Text] [Tokyo KYODO in English 0131 GMT 3 Sep 85 OW]

TELECOMMUNICATIONS STANDARDS GROUP--Tokyo, 19 Aug KYODO--A private committee to formulate voluntary rules concerning technical standards on telecommunications equipment will be set up in Tokyo on August 29 with its door opened to foreign enterprises, sponsors said Monday. The sponsors met to prepare for the creation of the organization, recently agreed on between Japan and the United States as a means of opening up Japan's telecommunications market. Japan agreed to reduce substantially the number of technical standards it sets on telecommunications terminals such as telephones and facsimiles and allow private enterprises to fix such rules voluntarily as much as possible. Nippon Telegraph and Telephone Corp, communications equipment makers, value-added network (VAN) operators and a variety of other sectors are expected to join the proposed committee, they said. [Text] [Tokyo KYODO in English 1114 GMT 19 Aug 85 OW]

NATIONAL VAN SERVICE--Tokyo, 20 Aug KYODO--United Net Corp., a nationwide network service enterprise, Tuesday announced a cooperation agreement with 20 major computing centers, based in 20 major cities from Hokkaido down to Kyushu. A spokesman said United Net, which incorporates investment by 56 major enterprises of different industries, led by Computer Service K K, a leading data-processing firm, entered into tieups with the 20 companies in preparation for starting a nationwide VAN (value added network) next April. VAN is a data communications service which links different types of computers and terminals using chiefly leased circuits. It is equivalent to America's "enhanced telecom service." As a first step, United Net will start a VAN service between Tokyo and Osaka in October, the spokesman said. He said the projected operation will undertake, among others, a data-processing service, on-line data transfer, voice transmission via leased circuit, transmission of data via leased circuit, and packet-switched data transfer using public telephone lines. The spokesman said United Net is an independent business and one of the nation's eight nationwide VAN service companies so far registered with the Ministry of Posts and Telecommunications since the liberalization of the telecom business April 1. [Text] [Tokyo KYODO in English 1024 GMT 20 Aug 85 OW]

GUIDELINES FOR TELECOMMUNICATIONS INDUSTRY--Tokyo, 7 Aug KYODO--The Post and Telecommunications Ministry submitted to the ruling Liberal-Democratic Party Wednesday a seven-point policy guideline for telecommunications projects the ministry will promote in fiscal 1986. The report, delivered to the LDP's telecommunications committee, called for development of a competitive domestic telecommunications market. It also aims at promotion of new technological development as well as research and development of space communications technology, including the launching of advanced telecommunications satellites. It said the ministry will offer various forms of incentives, including financial and tax incentives, to enterprises newly entering the market. The report said the ministry will also try to liberalize the international enhanced electronics communications network as early as possible. Tax and financing incentives will be offered to promote imports of foreign-made communications equipment in order to correct the imbalance in telecommunications trade with foreign countries, notably the United States, it said. [Text] [Tokyo KYODO in English 1146 GMT 7 Aug 85 OW]

SATELLITE COMMUNICATIONS LATE 1986--Tokyo, 12 Sep KYODO--Kokusai Denshin Denwa Co (KDD) said Thursday it will inaugurate in October next year a highly digitalized international satellite communications service linking Japan and North America. The service with the United States and Canada will use the new business service in Intelsat (International Telecommunications Satellite Organization), which envisages high-speed, large-capacity overseas telecommunications by linking small earth stations built on the roofs of buildings via Intelsat Satellite, a company spokesman said. Its transmission speed ranges from 64 kilobits to two megabits (two million bits) per second. It can transmit and receive either one way or both ways for a desired time, the spokesman said. KDD plans to make its fees about half those of conventional international telephone services. The service will be used for international television conferences and high-speed transmission of newspaper information as well as data transmission, he added. [Text] [Tokyo KYODO in English 1126 GMT 12 Sep 85 OW]

INTEGRATED CIRCUIT DEVELOPED--Tokyo, 12 Sep KYODO--NEC Corp has developed two kinds of high-output microwave amplification integrated circuit (IC) for satellite communications, the company said Thursday. The IC's are both composed mainly of three gallium arsenide field effect transistors (FETS), each having a different performance, integrated on an alumina substrate. One of the two types can amplify signals by 250 times and the other by 60 times. The two types, used as a unit, can amplify electric signals of 0.1 milliwatt or below, to one watt, an official said. The official said the strengths of such signals can be increased to two and four watts by adding more FET's to the IC's. A FET is a nonrectifying transistor with a circuit application like that of a vacuum tube, with principal conduction path through a bar of an N-type semiconductor. He said a much smaller basic transmitter can be made by combining the two types and a power source. Samples of the IC's will be available immediately to users at 132,000 yen for each set. He said NEC is the world's first company to put such high-output amplification IC's for satellite communications on sale. [Text] [Tokyo KYODO in English 0721 GMT 12 Sep 85 OW]

KDD, NTT FORM COUNCIL--Tokyo, 23 Aug KYODO--Five firms, recently licensed to start "type 1" telecommunications business -- owning, operating and renting telecom circuits -- Friday formed a council together with Kokusai Denshin Denwa Co (KDD) and Nippon Telegraph and Telephone Corp (NTT) to promote mutual cooperation for the development of the telecommunications industry. Following the liberalization of the Japanese telecommunications business from April 1 this year, the five firms applied for the "type 1" license and obtained it in June. Until then domestic telecommunications business had been monopolized by NTT. KDD is the sole operator of Japan's international communications business. The five are Japan Telecom Co, Daini-Denden Inc, Teleway Japan Ltd, Japan Communications Satellite Co and Space Communications Corp. Shingo Moriyama, president of Daini-Denden, assumed the chairmanship of the new council. He told newsmen the immediate tasks of the council include a request to the government and the ruling Liberal-Democratic Party to reduce local tax on the five new firms. The council will also seek low-interest loans from the Japan Development Bank for capital spending of the member firms, and will study technical standards for telecommunications, he said. [Text] [Tokyo KYODO in English 1155 GMT 23 Aug 85 OW]

TELEPHONE RECEIVERS FROM BRITISH--Tokyo, 21 Aug KYODO--Nitsuko Ltd., a top Japanese exporter of telephone receivers, said Wednesday it has basically agreed with Plessey of Britain to import Plessey products such as home-use telephone receivers and small private branch exchanges for sale in Japan from next year at the earliest. The Japanese maker, which has been co-operating with the British telecommunication equipment maker for three years, wishes to develop the tieup partly to avoid trade friction between the two countries. Nitsuko now exports some five billion yen's worth of touch phones and other terminal equipment to the British firm each year. But there are no imports from the trading partner. [Text] [Tokyo KYODO in English 0245 GMT 21 Aug 85 OW]

INTERNATIONAL COMMUNICATIONS CONFERENCE OPENS--Tokyo, 6 Sep KYODO--The International Institute of Communications (IIC), an independent, nongovernmental organization concerned with current uses and future development of communications, began a five-day annual conference here Friday, with 200 delegates from 30 countries taking part. Prince Mikasa and Posts and Telecommunications Minister Megumu Sato were among guest speakers at the opening session held at Keio Plaza Hotel here. Under the theme "Communications: The Crossroads of Culture and Technologies," the conference will discuss how the progress of communications systems and technologies influences legal, economic, social and cultural conditions. Presentations scheduled during the meeting include those on Japan's fifth-generation computer project and communications in China. Headquartered in London, the IIC groups about 100 institutional and 1,000 individual members around the world, providing an interdisciplinary forum, undertaking research studies and publishing reports on major communications issues. [Text] [Tokyo KYODO in English 0138 GMT 6 Sep 85 OW]

CS0: 5560/088

PEOPLE'S REPUBLIC OF CHINA

CHINA'S FIRST SOUTH POLE OBSERVATION STATION ESTABLISHED

Beijing DIANXIN JISHU [TELECOMMUNICATION TECHNOLOGY] in Chinese No 6, 10 Jun 85 pp 6, 11

[Article by He Xiaoyin [0149 2556 0603]: "How the South Pole Observation Team Communicates with Home Base"]

[Text] Our country's South Pole Team has established for the country the First South Pole Scientific Observation Station--China's South Pole Changcheng [Great Wall] Station in Antarctic world of ice and snow. The distance from Beijing to the Changcheng Station is 20,000 km, with a time difference of 12 hours. Launching from the Port of Shanghai, the observation fleet had to cover the vast Pacific Ocean, pass the equator where the sun shines perpendicularly, enter the earth's Antarctic circle, to finally reach George Island where it would station. Then how would the observation team communicate and make contact back home? Undoubtedly, it is impossible to use wires, and must be accomplished through radio communication.

The departments that were involved in this project have performed thorough planning before the observation team set foot. The State's Marine Bureau, the Ministry of Posts and Telecommunications, the Ministry of Electronics Industry and the Marine Department of the Ministry of Communications coordinated and organized the communication project. It was determined that the fleet's command ship is to be Xiangyanghong No 10; the sea region for the round-trip operation is between 90°-180° bearing with Beijing communication; the main station is to be positioned in Beijing and the Changcheng Station is to be located at 62° 12'59" south latitude, 58° 57'52" west longitude. Personnel both aboard the ships and stationed on shores extensively collected information to establish various communication schemes, and selected the working frequency and hour for the ship and the land station based on the changing pattern of the ionosphere. After departing from the fort, the fleet had been in contact with the main station in Beijing using pre-determined frequency at a particular timeframe. On the basis of wire communication, single-band communications were conducted selectively, and satisfactory results were obtained. However, as the observation fleet reached the vicinity of the Antarctic Peninsula, short-wave communication with Beijing's main station experienced difficulties. The communications staff continually attempted to communicate day and night only to hear nothing but noise, and the signals were momentarily disrupted, and in a flash, were about to die. At that time emergency measures had to be employed--to use the satellite communication facilities which were equipped on board, in conjunction with the marine satellite system to communicate. In other words, using

the ionosphere-penetrating ultrahigh frequency and microwave (248 6424~MHz) waves, signals were transmitted from the satellite communications equipment on board Xiangyanghong No 10 to the synchronous satellite above the Atlantic Ocean which transferred the signals to a ground station in the United States which would in turn transfer the signals to the synchronous satellite above the Indian Ocean via the Marine Satellite Communication Exchange Center of the U.S. Communication Satellite Company Headquarter. The signals were then routed to the satellite's ground station in our country and finally reached the command quarter of the State's Marine Bureau in Beijing's International Exchange Center. The entire process only took 2 minutes.

It is expensive to lease a marine satellite system. In order to save on foreign exchange as well as to gather first-hand information on communications in the Antarctic region, short-wave communication had to be resumed as soon as possible. The communication personnel in Beijing and aboard Xiangyanghong No 10 performed extensive analysis and exploration to identify finally the factors which affected short-wave communication: the magnetic field in the Antarctic region is strong, the effect of ionosphere's fluctuation is tremendous, the weather can change instantly resulting in tremendous static disturbances, the time difference is 12 hours relative to Beijing which is exactly opposite in terms of day and night, hence the ionosphere is high at one end but low at the other. Based on the changing pattern of the ionosphere, they managed to conclude that the best time to communicate is from 1300-1700 hour Beijing time, and that the best frequency band for Beijing-South Pole communication is 11 MHz to 15 MHz.

As of now, China's South Pole Changcheng Station has long been established. At the Changcheng Station, short-wave communications equipment has been installed, and a large rhombic antenna has been erected. The new test in communication from Beijing to the South Pole has started once again...

13042

CSO: 5500/4152

2 October 1985

## PEOPLE'S REPUBLIC OF CHINA

## CHINA'S FIRST EXPERIMENTAL COMMUNICATIONS SATELLITE INTRODUCED

Beijing DIANXIN JISHU [TELECOMMUNICATION TECHNOLOGY] in Chinese No 6,  
10 Jun 85 p 31

[Article by Tian Gong [3944 0364]: "An Introduction of the Run Status of Our Nation's First Experimental Communications Satellite"]

[Text] Since the launching on 8 April of last year at 7:20 pm, our nation's first experimental communications satellite has been running normally on a synchronous orbit of 36,000 km above the earth with all the systems aboard functioning well.

The international code for this satellite is STW-1 which stands for Shiyan Tongxin Weixing, our nation's first experimental communications satellite. With a diameter of 2.1 meters, the height of this satellite is 3.1 meters including the antenna. Located at 125° east longitude above the equator (above Indonesia), this satellite weighs 900 kg on the transition orbit, and 420 kg when fixed. Equipped with two communication transmitters having a life expectancy of 3 years and a 35 db EIRP, the satellite communicates in C wave band frequency, i.e. upper/lower is 6 GHz/4 GHz.

At the present time our nation's six ground stations which are respectively located in Nanjing, Beijing, Shijiazhuang, Kunming, Urumqi and Lhasa, can communicate via this experimental satellite.

For instance, the actual scene of the grand scale celebration activities in front of the Tiananmen in the capital city on the national day in 1984 was transmitted on real time to Lhasa and Urumqi.

Many departments in such sectors as the military, television, broadcasting, hydropower, and the press in our country have made use of this satellite for over a year. Digital and simulation telephone projects have been launched, various communication trial applications such as television and broadcasting relaying, graphic and text image transmission, as well as the transmission of data and table, have been started with fairly good results.

13042

CSO: 5500/4152

PEOPLE'S REPUBLIC OF CHINA

COMMUNICATIONS EXPECTED TO EXPAND BY YEAR 2000

OW030903 Beijing XINHUA in English 0727 GMT 3 Aug 85

[Text] Changchun, 3 August (XINHUA)--There will be an average of one telephone for every 10 city-dwellers in China by the year 2000, according to officials attending a conference in this Jilin provincial capital.

And in major cities, the figure is likely to be one telephone for every four people, the Ministry of Posts and Telecommunications Conference, which ended on Friday, was told.

A ministry official said that by the end of the century, the country would have more than 33 million telephones, compared with five million at present.

In addition, 160 billion items of mail are expected to be handled a year by then, compared with 20 billion in 1980.

To achieve this, new technology and improved equipment will be introduced throughout the whole communications network.

The state will provide funds for this on a national level, while local authorities, collectives and individuals will be encouraged to run rural communications businesses.

The job responsibility system, linking reward with effort, should be applied in Posts and Telecommunications Departments to boost efficiency and financial returns, said the official.

The telecommunications network will be computerized by the year 2000. Computers and data banks will be linked up between large cities in China as well as with foreign data banks.

Advanced communications methods, including optical and satellite systems, video-telephones and high-speed facsimile transmission, will operate between major cities.

CSO: 5500/4154

2 October 1985

## PEOPLE'S REPUBLIC OF CHINA

## BRIEFS

ZHU XUEFAN PRESSES FOR MORE PHONES--Beijing, 10 July (XINHUA)--Beijing must have at least 600,000 telephones by 1990. Zhu Xuefan, Vice-chairman of the Standing Committee of the National People's Congress, made this emphatic statement here today at the opening session of a national symposium on urban infrastructural economics. The gathering is being attended by more than 100 city planners and social scientists. The increase would be more than 2.5 times compared with the present 170,000 telephones in the nation's capital. Zhu said that collectives and individuals, as well as central and local government departments must pool their funds to attain this goal. Zhu, an ex-minister of Posts and Telecommunications, deplored the shortage and poor quality of the services and said, "such a situation, if allowed to continue, would seriously impede China's ongoing modernization drive." He said, infrastructural projects, and the telephone service in particular, must be stressed in the present urban economic reform. [Text] [Beijing XINHUA in English 1211 GMT 10 Jul 85 OW]

TV BROADCASTS TO REMOTE AREAS--Shanghai, August 1 (XINHUA)--From today, even the remotest parts of China will be able to receive television broadcasts, as the country started to beam programs through an international telecommunications satellite. People in all parts of the country can now view TV programs broadcast by the Chinese Central Television Station (CCTV) in Beijing the same day. An agreement between the Chinese Ministry of Posts and Telecommunications and the International Telecommunications Satellite Organization (Intelsat) allows China to use the satellite for three months free of charge. China will start to rent the satellite from November 1. The Hongqiao earth station in Shanghai will beam programs received from Beijing to the satellite. Earth stations dotted around the country, with antennae six meters in diameter, will then distribute the broadcasts. The central government has built 53 such receiving stations in 16 remote provinces and autonomous regions including Tibet, Xinjiang, Qinghai, Gansu, Ningxia, Guizhou and Shaanxi. All the equipment was designed and made by the first institute under the Ministry of Posts and Telecommunications, which is based in Shanghai. [Text] [Beijing XINHUA in English 1629 GMT 1 Aug 85 OW]

HEBEI UPDATING TELEPHONE EXCHANGE--Qinhuangdao, 13 Aug (XINHUA)--Work has started on a seven-story telephone exchange building in Qinhuangdao, an open coastal city in Hebei Province. The program-control equipment of the exchange, with a capacity of 12,000 lines, will be imported from Sweden. When completed, by the end of next year, it will be able to handle domestic and international

direct calls, and communicate with buses in the city through an intercom system. It will also offer telex services. The building will have a floor space of 4,800 square meters, and 6,000 lines will be installed this year. [Text] [Beijing XINHUA in English 1611 GMT 13 Aug 85 OW]

XIZANG TELEVISION STATION--Lhasa, 20 Aug (XINHUA)--The Tibet television station began to beam a regular Tibetan program from this evening. The program, made by the station itself, includes news, special subjects, television plays and dubbed films. Previously, the station mainly broadcasted programs in the Han language (Chinese) directly from the Beijing-based Chinese Central Television Station (CCTV). It made very few programs of its own. The CCTV programs on film used to be sent to Lhasa by air. Therefore the local viewers had to watch them often a week later than those in other parts of the country. Now the programs are relayed through satellite. [Text] [Beijing XINHUA in English 1616 GMT 20 Aug 85 OW]

GUANGZHOU IMPROVING PHONE SYSTEM, ROADS--Guangzhou, 16 Aug (XINHUA)--Guangzhou is importing more advanced telephone systems to cope with communications problems, according to city authorities. Guangzhou, capital of Guangdong Province, is one of China's 14 coastal cities opened wider to foreign investment last year. A newly imported 26,000-line program controlled telephone switching system has just gone into operation, a similar 8,000-line system is scheduled to be completed late this year. They will bring the city's total number of telephones to 65,000. When another 14,000-line program controlled system opens service in October next year, telephone tension in Guangzhou will be basically eased. Installation of micro circuits between Guangzhou and Fushan, Guangzhou and Haikou, Hainan Island, and Guangzhou and Shantou, is scheduled for completion late this year. Construction of an optical fibre communications system has just begun. In addition, a six-lane highway bridge across the Pearl River, which separates the city of Guangzhou into three parts, went into service early this year, and work is under way to build another 2,800 meter-long bridge. Five overpasses and seven footbridges have been built in the city's main streets to alleviate traffic tension. [Text] [Beijing XINHUA in English 1246 GMT 16 Aug 85 OW]

CSO: 5500/4154

CANADA

## BCE PROFITS, ACQUISITIONS, CELLULAR SERVICE ANNOUNCED

### Second Quarter Profits

Ottawa THE CITIZEN in English 25 Jul 85 p C13

[Text]

MONTREAL (CP) — Bell Canada Enterprises Inc., the parent company of Bell Canada, Northern Telecom Ltd. and TransCanada PipeLines Ltd., among others, said Wednesday that its profits rose 13.3 per cent in the three months ended June 30.

Jean de Grandpre, chairman of the holding company, credited telecommunication operations, sales by Northern Telecom and international consulting services for the increase in net income to \$274.5 million, or \$1.11 a share.

In the corresponding quarter last year Bell Canada Enterprises reported profits of \$227.4 million, or 98 cents a share. For the first half of 1985 profits stood at \$529.9 million, or \$2.15 a share, compared with \$40.2 million, or \$1.87 a share, in the first six months last year.

De Grandpre warned that the company's profit growth would probably slow in the rest of 1985, although results for the year would be an improvement on 1984 earnings.

Total operating revenues for the first half were \$6.34 billion, up from \$4.92 billion in the first six months of 1984.

The average number of shares in circulation at the end of the first half was 236.9 million, close to the 235.9 million shares on the market a year earlier.

Bell Canada contributed \$1.38 a share for the first six months, compared with \$1.28 a share last year, while Northern Telecom accounted for 47 cents a share in profits, up from 38 cents a share in the first six months of 1984.

TransCanada PipeLines added 22 cents a share for the six-month period.

### Purchase of Four Firms

Windsor THE WINDSOR STAR in English 19 Aug 85 p D9

[Article by David Oxtoby]

[Text]

TORONTO — Like a poker player picking up cards in search of a royal flush, Bell Canada is steadily acquiring the firms it needs to be a major force in office automation.

In the past six months the utility, whose parent Bell Canada Enterprises Inc. (BCE), boasts more shareholders than any other Canadian corporation, has picked up three computer-

related operations and formed a joint subsidiary with an engineering consulting firm.

Bell Canada's expansion is predicated on the belief that the markets for computers and telecommunications equipment are quickly converging to form what may become the biggest business ever.

"**BELL CANADA** intends to be an active player in these emerging markets," says company chairman Raymond Cyr.

Backed by BCE, which last year netted \$894 million on revenues of \$10.6 billion, Bell has the funds it needs to buy high-tech expertise. So far, Bell's purchases have centered on computer sales and service and data management systems.

The first move came in February, when Bell joined Montreal-based Lavalin Inc. in a 50-50 venture called Lavalin Bell Geomat Inc., to build automated data management systems. Neither partner has revealed the capitalization of the new firm, but president Benoit Cote says the company could land between five and 15 contracts in its first year, each worth "from \$50,000 to millions."

Bell took its second step in April, when it bought the data systems division of its half brother, Northern Telecom Ltd. of Mississauga, Ont., and renamed it Bell Data Systems.

**THEN, ON** July 24, Bell agreed to pay Ottawa real estate developer Campeau Corp. \$35 million for its 48.8 per cent stake in Computer Innovations Distribution Inc., Canada's third largest computer retailer with 50 sales and service outlets nationwide. The price-tag worked out to \$2.80 a share. Computer Innovation stock has since climbed as high as \$3.50 and this week traded at about \$3.20, an indication the market believes the deal will be good for the retailer.

And last week Bell struck again, announcing its intention to buy TRW Data Systems, the computer-servicing subsidiary of TRW Canada Ltd. Bell has not released TRW's price, but with 28 offices and 125 employees, the firm is estimated to be worth some \$20 million.

**WITH FOUR** new firms in the bag will Bell call a halt to its shopping spree? Most industry watchers think not.

The consensus is that Bell's high-tech stable is still short some horses, namely a modem manufacturer, some software developers, and possibly a firm with video and facsimile transmission technology. Few observers, however, want to guess at the time frame for these acquisitions, and Bell executives remain mum.

But analysts aren't shy to predict that Bell will soon capitalize on the multiplicity of its talents, through what some call "cross fertilization". They envision Computer Innovations offering TRW service contracts for its equipment and even Bell's retail "Phonecentres" selling computers.

"**COMPUTER** Innovations' competitors should be getting very nervous because of the potential synergies between it and Bell Canada in terms of sales distribution," says Jonathan Cunningham, an analyst with Nesbitt Thomson Bongard Inc. in Toronto.

But executive vice president Jean Monty denies that Bell has any plans to integrate operations in the near future. Monty labels the recent purchases "a positioning move" and says Bell will simply hold the acquisitions for now.

It is hard to predict what will happen with computers and data processing 10 years hence, he says, but adds that Bell wants "to make things happen" and "be sure we're there when they do."

If Bell does continue its shopping it will, as before, receive only minimum supervision from its parent, BCE.

"**THEY HAVE** the freedom to make their own decisions, particularly when they relate to the business they're in," says Stuart Spalding, BCE's executive vice president of finance. "The BCE group of companies is not run on a highly centralized basis."

"If all of the existing deals were moved up to BCE, there would be a lot less incentive to be an executive at Bell Canada," he adds.

Analysts agree BCE's policy is, for now, a good one. "When your subsidiary companies are successful you don't need to tell them what to do," says Nesbitt's Cunningham. "BCE has the Midas touch. They certainly have done no wrong."

## Early Cellular Service

Ottawa THE CITIZEN in English 20 Aug 85 p F3

[Article by Greg Barr]

[Text]

Anxious to get a jump on the competition in the Ottawa-area market, Bell Cellular of Toronto launched its mobile cellular radiotelephone service Monday.

Both Bell Cellular and Cantel Inc. of Montreal were to begin offering the service to Ottawa-Hull customers on Sept. 1, but Bell hopes a two-week headstart will convince potential subscribers that the company is better prepared to tackle the job than Cantel.

Cellular radiotelephone technology allows customers to place calls from a vehicle to virtually anywhere in the world, effectively turning a car or truck into a mobile office.

The service has been available to four Canadian cities - Toronto, Hamilton, Oshawa and Montreal - since July 1 and will eventually reach 23 metropolitan areas across the country. Cantel is the only national cellular radiotelephone carrier, competing with the regional telephone company in each province. Bell Cellular, a member of the Bell Enterprises Inc. group of companies, can only offer the service within its own territory.

Ottawa-area subscribers in the area roughly bounded by West Carleton, Buckingham, the Gatineau Hills and Manotick can now use the Bell Cellular system. Customers in Stittsville, Richmond and Carp will be able to use the system by mid-September.

Though he was surprised to hear that Bell Cellular had quietly slipped into the Ottawa-Hull market ahead of schedule, Cantel vice-president of sales and marketing Paul Kavanagh said it's no real advantage.

CSO: 5520/50

CANADA

TELIDON TECHNOLOGY STATUS, ABSENCE AT EXPO 86 DISCUSSED

Videotex System Status

Toronto THE GLOBE AND MAIL in English 2 Aug 85 p B12

[Article by Karen Howlett]

[Text]

Telidon, a Canadian-developed computer technology that transmits pictures and text, is evolving quite differently — and much more slowly — than first anticipated.

When the two-way, or videotex, system was launched in the late Seventies, industry experts were prone to blue-sky predictions about the thousands of consumers across Canada who, using a computer keypad and a television set, would call up news stories and sports scores, play video games, send electronic mail and bank and shop at home.

It has not worked out that way. "Not too many people are willing to pay for news, weather and sports when they can get enough free," said Douglas O'Brien, the inventor of Telidon and vice-president at Idon Corp., an Ottawa consulting company.

To date, there is no videotex service in

Canada for consumers. In the United States, where such services have been launched, consumers have been slow to accept them. For example, Knight-Ridder Newspapers Inc. of Miami is estimated to have spent \$40-million (U.S.) on its Viewtron service in southern Florida. So far, it has only 3,000 subscribers.

After injecting \$69-million into Telidon over the past six years, the federal Government halted further funding this spring. A year ago, Teleglobe Canada ended its Novatex experiment in business videotex, after investing three years and \$4-million.

In the private sector, Southam Inc. of Toronto said this week it is rationalizing the operations of its money-losing Infomart subsidiary, an electronic publishing venture with projects in Canada and the United States. Over the past five years, Infomart has repre-

sented an after-tax cost to Southam of about \$15-million.

Infomart is not, however, cutting any of its service. Instead, it is "making reductions where we can find a duplication of effort," said president Robert McConnell. Infomart laid off 43 of its 270 employees in Toronto yesterday.

Still, financially viable markets do appear to be developing, particularly those for specialized applications.

Grassroots, Infomart's most successful product, is an agricultural service for farmers in Winnipeg. Despite the company's rationalization, implementing the service may be accelerated in the United States.

Grassroots America, a joint venture with three U.S. agricultural co-operatives, has just completed a pilot project, and Grassroots California, a venture with a West Coast newspaper group, re-

cently went commercial with a small number of subscribers.

Grassroots — the service gives farmers weather information and commodities' prices — fills a valid business need, said David Carlisle, president of Network Videotex Systems Inc. of Toronto and a former president of Infomart.

Teleguide, Infomart's data base listing movies and restaurants, is used by about 1.4 million people a month, Mr. McConnell said. By year end, there will be 2,000 Teleguide terminals installed in North America, including those for which Infomart licences the technology to other companies.

About 100 Toronto households are testing a home banking service through an experiment run by the Bank of Montreal and several U.S. financial institutions. The one-year test ends in September.

Furthermore, the videotex market is attracting key players.

International Business Machines Corp. of Armonk, N.Y., has entered a joint venture for electronic publishing with Sears, Roebuck and Co. of Chicago and CBS Inc. of New York to supply home information services. IBM also has a joint venture with Merrill Lynch, Pierce Fenner & Smith Inc. of New York to provide business information electronically.

Mr. Carlisle estimated 53 companies have plans to introduce videotex in the United States over the next two years. Most plan to offer services such as home banking and shopping.

Roy Marsh, acting director of Telidon in the federal Department of Communications, said the videotex industry in Canada has had a good start. He estimated the technology has created about 1,500 jobs in the country. "I foresee a bright future."

He also said that Telidon — a specific format in which videotex information is displayed on the screen — has been adopted by the United States as the standard for all significant current projects. It is known as the North American Presentation Level Protocol Syntax (NAPLPS) standard.

#### Expected Absence at Expo 86

Toronto THE GLOBE AND MAIL in English 2 Aug 85 p B14

[Article by Larry Hannant]

[Text]

Telidon, one of Canada's foremost communications innovations, could be absent from Vancouver's Expo 86, which features achievements in communications as one of its two main themes.

Telidon is a videotex protocol designed and developed in the federal Department of Communications. Between 1979 and March of this year, the department spent \$69-million to stimulate a Canadian videotex industry.

The effort has met with some success. Telidon — also known by the acronym NAPLPS (North American Presentation Level Protocol Syntax) — is used by virtually all videotex companies

in North America and is one of only three standards recognized by the international communications standards organization, the CCITT.

Expo 86, however, has signed a contract with IBM Canada Ltd. of Markham, Ont., giving that company an exclusive right to provide computer-based Expo information at the transportation and communications exposition.

As an official supplier to Expo, IBM is providing an \$18-million computer system free.

"It's a chance for them (IBM) to showcase their system and to bank on the prestige of being associated with a world exposition," said Brad Phil-

ley, co-ordinator of publicity services for Expo 86.

IBM's phase one system, which has been operating at the Expo preview centre since May, does not use NAPLPS, said James Rolston, manager of IBM's Expo 86 project.

NAPLPS is unlikely to be used much even in the phase two system that will be seen by millions of people who touch the screen of 90 IBM display terminals scattered over the 70-hectare exposition site.

Mr. Rolston said the technology in the two systems will remain the same, although software changes to the updated system should make it NAPLPS-compatible.

John Thomson, manager of information services at Expo 86, said some frequently changing Expo information in the IBM system might be created in NAPLPS format, since it is a standard that allows easy and quick changes.

But if there is a single place where an Expo visitor could see and learn about Canada's Telidon system, it would have to be the Canadian pavilion, he said.

Even it might not have a Telidon display.

James Patterson,

manager of media relations at Canada Place, said the pavilion will make use of the IBM system for Expo information.

"We may also have an internal system for Canada Place," he added. "That hasn't been decided."

The IBM system is also being considered for that internal computer display, he said.

Expo's snub of Telidon has at least one of Canada's struggling videotex companies angry. New Media Technology Ltd. of Burnaby, B.C., headed by Telidon pioneer John Madden, had hopes of seeing its terminals on the Expo site.

Lynda Harris, director of market development for New Media Technology, said "not having an opportunity to at least demonstrate that technology at a fair that's related to communications is very sad."

"The irony is that Telidon is a successful technology for a public access environment. There are half a dozen cities in North America now that have very large NAPLPS data bases . . . . It's not that Telidon is not proven technology, it's that this particular vendor (IBM) is not in the forefront of the technology."

CANADA

CRTC DEFERS DECISION ON CANADIAN CONTENT IN BROADCASTS

Toronto THE GLOBE AND MAIL in English 23 Jul 85 p B16

[Article by Harvey Enchin]

[Text]

The Canadian Radio-Television and Telecommunications Commission has put the issue of Canadian content on the back burner at the behest of a task force set up in May by federal Communications Minister Marcel Masse.

The federal regulator said it agreed with a suggestion contained in a letter from the Task Force on Broadcasting Policy to defer its consideration of certain issues until the task force has an opportunity to submit its recommendations. The issues include several applications by pay and specialty television services to reduce Canadian content in their programming.

The task force, es-

tablished to develop an economic and cultural strategy to guide the evolution of Canadian broadcasting, is not required to make its recommendations until Jan. 15, 1986.

The CRTC, on the advice of the task force, has also decided to defer consideration of applications to provide children's, youth and family-oriented cable services, and applications for Canada-wide distribution of existing Canadian television stations.

The applications include those of First Choice Canadian Communications Corp., Allarcom Pay Television Ltd., Telelatino Network Inc. and Premier Choix/TVEC Inc. to amend their Canadian-content re-

quirements.

Also included are applications by Francois Macerois on behalf of Young Canada Television, backed by the National Film Board of Canada, to operate a national programming service for Canadian children and youth; Susan Douglas Rubes on behalf of The Family Channel Inc., supported by First Choice and Allarcom, to operate a national general-interest, pay-television service; and Roger Price on behalf of Youth Broadcasting Inc. to operate a children's and youth specialty service.

"We'd like a decision as soon as possible so we know where we stand," said Emilio Mascia, president of

Telelatino. "But we understand the necessity for the CRTC to see in what direction they are going. We hope the CRTC will understand our position and be lenient if we don't keep our promise of performance on Canadian content."

The CRTC said its deferral does not affect consideration of an application to provide a Canadian-wide ethnic television service and applications to extend certain services.

Other applications for a new French-language television service in Montreal and Quebec City and a new English-language service in Regina and Saskatoon will be processed as scheduled, the CRTC said.

CSO: 5520/50

CANADA

## TORONTEL TECHNOLOGY IMAGE SYSTEM APPLICATIONS EXAMINED

Toronto THE TORONTO STAR in English 2 Aug 85 p E1

[Article by Leslie Fulton and George Brett]

[Text]

It could have been the biggest day in Victor Pacione's career.

But what was supposed to be a first contact with the Nassau space shuttle Challenger was just a garble of voices that no one could understand.

For the second pass-by, Pacione and his friends anxiously huddled around the video monitors waiting for what was supposed to be a clear picture of the shuttle. But all they got was an earful of static.

Pacione, the president of Torontel Technology Systems Ltd., a high-tech communications firm, is the soul Canadian distributor of the 1200C robot made by Robert Research Inc. of San Diego.

### Plain robots

The robots don't look like C3PO and R2D2 of Star Wars fame. In fact, they don't look like anything much except boxes about 4 inches high and a foot square.

In the case of the earth-mounted robot, it was set up in conjunction with a tracking antenna and slow-scan television system for tracking the Challenger across the sky.

While facsimile machines have been transmitting photographs over phone lines for years, the Robot Research system does not require "hard copy." It "can transmit anything you point a camera at," Pacione says.

The image is converted to a sequence of audio tones — each tone represents a different color in the picture. It's then sent over radio or telephone airwaves to another robot unit, which then converts it back to a video image.

Yesterday Pacione set up the box at the Parkway Inn Hotel in Markham.

At 3 p.m., only Pacione, a few friends, and his brother Joe — who covorted about the room in a purple sequined martian costume, neon wig and green Mr. Spock outfit — were present to witness the event.

They were to be denied success but they intended to keep on trying right through the week-end.

Pacione, 28, is a self-confessed gadgeteer-entrepreneur. An East-end boy, he went to Danforth Technology School and later took marketing courses at Ryerson Polytechnical Institute.

Last year, Pacione decided money could be made in telecommunications.

"I researched the market for

about six months and I thought this is where the trend would be. The field is so new that there is no difficulty getting in," Pacione said.

He admits a hook-up with the shuttle would be "the ultimate demonstration to give to a potential buyer. When they ask who uses the box, I can just flick on the TV and have them talk to the astronauts."

What he also stresses is some of the down-to-earth applications of this technology:

□ For example, Bell Canada and other Canadian phone companies use Robot Research robots (but a different model from that used in the earth-to-shuttle test) for teleconferencing. No longer is it Buck Rogers stuff to see the person you're talking to across the country.

□ Potential medical uses include the ability to transmit X-rays and other records over the phone or by radio. An X-ray, for instance, could be transmitted from a remote accident site to a big-city hospital for analysis.

□ There are various defence uses, says Pacione. While he is vague about what they are, he says he has sold the systems to the Canadian armed forces.

□ Crime detection holds particular promise. Pacione says about 95 per cent of burglar alarms are false alarms — tripped by accident, often by the business owner who returns for his briefcase and forgets to deactivate the alarm before entering the business premises.

### Police troubled

Yet the police must treat all alarms as the real thing. Apart from the expense the police undergo unnecessary strain when they must approach a potential burglary site on the assumption that armed robbers may be lying in wait for them, Pacione says.

By using the Robot Research system in combination with a burglar alarm, police can get "visual confirmation" when an alarm is tripped. A photograph of a burglary suspect could automatically be flashed to a police station.

And if that prospect isn't enough to give break-in artists the shakes, there is no technological reason why the same photograph could not be flashed to a robot-equipped cruiser speeding to the scene. The police would know exactly what the suspect looks like.

CANADA

BRIEFS

CNCP-AT&T AGREEMENT--CNCP Telecommunications of Toronto has signed an agreement with American Telephone & Telegraph Co. of New York that will allow one company's private telephone line subscribers to hook up with the company in the other country. The agreement, which requires the approval of the Canadian Radio-Television and Telecommunications Commission, pertains to both voice and data private-line subscribers. Private lines link two or more locations and are dedicated solely to the use of the customer leasing them. The CRTC allowed CNCP to enter the private-line market in 1979, in competition with the federally regulated telephone companies. CNCP now has an application asking the CRTC to let the company provide long-distance service to the general public. [Text] [Toronto THE GLOBE AND MAIL in English 8 Aug 85 p B6]

CSO: 5520/50

BULGARIA

NEW INTERNATIONAL TELEPHONE EXCHANGE ALMOST READY

Sofia IMPULS in Bulgarian 6 Aug 85 pp 1, 2

[Article by Eli Khorozova: "An Electronic Polyglot"]

[Text] On more than one occasion we have mentioned the international automated telephone exchange (MATTs), which is under construction at this moment, but this time our reasons are entirely concrete. Work on it has progressed so far that checks and testing are being conducted on the exchange simultaneously with the final installation operations. And despite the fact that the climatically controlled installations protect the MATTs and the people in it from the warm summer days, it is a rather hot time now for the specialists from the French Alcatel International firm and their Bulgarian colleagues: they are now faced with adapting the exchange first with the national telephone network and then with the international one. In parallel with this, the shop testing must reach to the last plate of each junction or block.

"In terms of technical equipment, the MATTs is a contemporary, digital exchange," says engineer Ivan Elitsin, a specialist from the Ministry of Communications, who is personally involved in putting the exchange in operation. "Its task is to connect the national system to the international telecommunications network."

It turns out that this operation, which might seem abstract to the unbiased reader, contains a very real expression: after this international automated exchange is put in operation, not only people living in the capital, but also subscribers in the 64 other villages of the national system for automation of intersettlement telephone communications will be able to dial almost any nation in the world automatically.

Arrangements by principle, which are customary for people moving into new quarters, already reign in the halls of the exchange. Most of the equipment cabinets are open, some specialists are working with them, others are checking the precision of the installations done according to specifications, still others are busy with individual parts, pieces, and documents. A team of our specialists, which will service the new electronic exchange, was chosen at the end of last year and has already gone through the required courses of instruction. As the head of the MATTs, engineer Ivan Nikolov explains, each of his eight highly trained colleagues is responsible for a precisely determined area and activity at the exchange.

The communications engineers will maintain it, and in this way the technology will be expressed through its testing and the elimination of anything that might harm it. Whereas the maintenance of the electronic exchange has been compared with that for the Crosspoint type, engineer Nina Pukhaleva has formed the conclusion that the more complex the system, the easier the servicing is. But a person needs not only specialized knowledge and skills, he must also take on a whole complex of psychophysical traits, in order to react quickly, to concentrate fully, to give the correct evaluation speedily, etc.

The MATTs also contains another meaning for the work "operation." Here it means observing the traffic and studying the demands and the corresponding expansion or contraction of the links and channels in a given direction for an hour, a day, or a season. (For an illustration, let us take the example of engineer Arso Mitov, the future crew leader. If a meeting of international importance takes place at the Lyudmila Zhivkova (NDK), more direct links will be made available immediately for the participating countries.) Still the two tendencies mentioned for the work of the exchange were comparable with what has been completed up to now with the traditional decimal-module exchanges. The novelty in this case is the management of the MATTs electronic system. Perhaps in order to characterize this type of activity, we should say that it will be controlled by engineers who are specialists in computers, who will take care of the programming software for the system.

This will be the direct work of the MATTs collective, which was chosen from the best cadres of the Sofia Telephone Exchange. And while the MATTs is being put in operation, even now, the collective is joining with the firm's representatives in browsing around the exchange, they will become acquainted with the essence of the equipment, and they will perfect their technical and language skills in the learning hall which has been organized for this purpose.

Absorbed in the conversation about the automated traffic between Bulgaria and the world communication mainlines, we should not overlook the other functional capabilities of the MATTs. Because of the new electronic technology, there will be a change in the so-called "International Operator" service, which now makes manual connections with the person sought. The hall where the operators will be situated is already sound-proofed, the working places are in order, and all that remains is linking the terminals. The operators too will take part in a preparatory course of study for dealing with the new technology. They will no longer have jacks, dials, and microphones. The citizen's request will appear on the screen, and the number will be dialed by keys. In the words of the vice chief for MATTs, engineer Irina Stancheva, the new style operator will no longer have the equipment of the monotonous labor, the labor-intensive written operations will be handled by fiche.

The new exchange is called a transit one. "This is because," engineer Ivan Elitsin explains, "it offers the possibility of carrying traffic from the European countries to a region of the Near East and vice versa." But basically when will we be able to make use of all this? The answer is that the MATTs will be put in operation by stages, and that automated links for

Bulgarian citizens to the world will be opened up on a widespread scale next year, the year of the party congress. This will be one more precondition for allowing Bulgaria to become an equal member of the world communications community.

12334

CSO: 5500/3033

ARGENTINA

COMFER PRESIDENT POINTS TO CRITICAL AREAS IN RADIO BROADCASTING

Buenos Aires LA PRENSA in Spanish 23 Jul 85 p 6

[Text] The president of COMFER [Federal Broadcasting Commission], Pedro Sanchez, pointed out the "urgent" need for "a broadcasting law that will replace the 'de facto' legal system still in force." He said that "incentives for investment in broadcasting should be given by offering a multiplicity of operating licenses and by giving exclusive rights to handle advertisements for private business to broadcasters," by excluding advertising from the state media.

Proposals

In an interview with NOTICIAS ARGENTINAS, Sanchez also proposed that "the 8 percent tax on the gross advertising revenue which radiobroadcasters now pay should be levied at the point of origin--that is, on the advertising agencies.

Sanchez reiterated that "the prohibition barring the print media from access to broadcasting media, as provided by Article 45 of the present broadcasting law, is unconstitutional and goes against Radical Party doctrine."

Three Problems

When he was asked to identify the three most serious problems facing Argentine broadcasting, he replied: "First of all, the nonexistence of a law to replace the 'de facto' legal system that we still have, for that system was developed for a society that was governed by others, and we now have a society of self-government."

"The present broadcasting law blocks any bidding for potential new stations. This is needed in order to begin to resolve the problems of our broadcasting system, which is now in a dismal state," he added.

He explained that "at present we have 157 radio (both AM and FM) and television (VHF and UHF) stations allocated, but there are another 578 radio and 212 television stations that have not been allocated; these are called free frequencies."

While on this topic, he warned that the international agreement on frequency allocation "expires in 1987, and any unallocated frequencies could be requested by nearby countries if we are not at least in the process of taking bids for them."

He noted that "the third major problem we have is the technological backwardness" of broadcasting facilities all over Argentina. He felt that "if the system were opened up through bidding, there would be a very great expansion in our national electronics industry, and then our technology would become less dependent on outside sources."

When asked how broadcasting might be promoted in the interior of Argentina, Mr Sanchez said that this could be done "through providing a multiplicity of licenses and by giving exclusive rights [to these stations] to handle advertising for private business,"

#### Economic Issues

When questioned about the resources that would be available for state operated broadcasting stations, given the state's economic problems, he said that "state broadcasting can carry out its missions and functions without handling any advertising."

"The state broadcasting media might eventually be supported by a federal coparticipation fund established through a direct tax on advertising," he remarked.

As an example, he explained that at present "broadcasters in the capital theoretically pay a tax of 8 percent of their gross advertising revenues, with deductions allowed to compensate for business expenses."

Sanchez maintained that "this percentage should be much lower and the tax should be levied at the point of origin, that is, at the point where the publicity is generated. In this way, advertising agencies would become agents which would withhold the tax."

#### Five Bills

Asked about the five broadcasting bills presented to Congress, he indicated that "in general, they are much influenced by a particular system, a structure that was worked out under the 'de facto' laws of 1957, 1972, and 1980, and even though some bills may introduce substantial modifications, because of this past structure, they are still more or less profound modifications of the existing legislation."

Sanchez pointed out that "the last action of a democratic government in terms of broadcasting was Dr Illia's regulatory decree on the regulatory decree of Aramburu in 1957."

## "Right to Respond"

On the bill on the "right to respond" in the communications media sponsored by Radical Senator Ricardo Laferriere, he said that "as a public employee, I can not express my opinion on that bill."

Nonetheless, he did say that "in general, laws providing a right to respond are damaging to freedom of expression, and foster positions that inhibit journalists."

"We have to be careful with these institutions that originated in democratic countries when there was a state monopoly on the communications media," he added.

He claimed that "when there is a plurality in the media and when there is generous access to it, a response arises through the very dynamics of events."

7679

CSO: 5500/2101

ARGENTINA

FIRST SHIPMENT OF MAGNETIC TAPES GOES TO JAPAN

Buenos Aires LA PRENSA in Spanish 26 Jul 85 p 10

[Text] IBM Argentina has exported a shipment of 3480 magnetic tapes for the international market. During the current year, such shipments will reach a total of approximately \$140 million, a 50 percent increment over its 1984 shipments.

The first batch of this magnetic tape subsystem was sent to the Japanese market. Later shipments will go to Australia, New Zealand, Mexico, and the Philippines, as well as some other countries. This list does not include deliveries to the domestic market.

This business deal, which required a \$12 million investment in high technology equipment, came about in less than a year after the announcement that this item would be manufactured in Argentina, as well as in the United States. This was an important qualitative step forward in terms of the technology that Argentina had been using, as it incorporates a strong electronics content, without thereby reducing the percentage of national integration involved.

This is also part of a program covering the next 5 years that includes investments of \$75 million in physical expansion of the Martinez plant, and the outfitting and development of local suppliers, to whom purchases of over \$300 million will be channeled during the same period of time. The plan's ultimate goal is to double the firm's volume of exports, reaching a cumulative total of \$850 million during the next 5-year period.

This strategy of making permanent investments in order to keep IBM Argentina as an active participant abroad means that today the Martinez factory is one of the 16 system integrators that IBM has outside of the United States. This plant stands out through its high level of international competitiveness, both in quality and in costs.

## The Product

The new product will provide major support for large computer systems, while also increasing the efficiency of tape systems, providing an increased output and reliability, and requiring reduced maintenance and space for its storage. The outstanding feature of this system is that it uses a small cartridge whose size is equivalent to a fourth of a conventional tape reel, with a storage capacity of 200 million bits (20 percent more than what is presently available), and a data recording or reading density of 38,000 bytes each 25 millimeters (6 times the density of current IBM tape systems).

In this way, information from a central computer can be transferred to new units or recovered from them at speeds of up to 3 million bits per second (more than twice the speed at which today's tape units can operate). This is made possible through an innovative head, a thin film recording head designed to record and read the tape's 18 tracks.

7679

CSO: 5500/2101

ARGENTINA

BRIEFS

TELEPHONE EQUIPMENT TO HAVANA--In order to set in motion and expand the \$6 million contract signed by IMEXIN [Enterprise for Import and Export of Infrastructure] of Cuba and Standard Electric Argentina for the supply of telephone equipment, components, and parts, directors of the Argentine firm traveled to Havana. During their stay, the Argentine businessmen also met with the Cuban minister of communications in order to familiarize him with a plan developed jointly with Cuban technical experts. Its objective is to expand and optimize Havana's telephone system. [Text] [Buenos Aires LA PRENSA in Spanish 20 Jul 85 p 10] 7679

CSO: 5500/2101

BAHAMAS

## ZNS RADIO, TV TARGET OF OPPOSITION CHARGES OF BIAS

### FNM Statement

Nassau THE TRIBUNE in English 24 Jul 85 p 1

[Text]

THE FREE National Movement today criticised ZNS radio and television for "continuing unfair, undemocratic and unjust practices."

In a prepared statement, the FNM accused ZNS of "blatant and shameless bias," and laid the blame "directly at the feet of Lynden Pindling and his government."

The statement listed several instances where they claim ZNS acted unjustly.

"When the Prime Minister addressed a PLP meeting in Holy Cross he was given full and frequent coverage," the release said. "When opposition leader Kendal Isaacs addressed an FNM meeting in Centerville ZNS carried less than a minute in a mutilated report."

"On July 19 the FNM put out a press release responding to Sir Lynden's comment about its planned boycott of activities relating to the Heads of Government Conference. Not a single word of this was carried by ZNS."

"On July 23 the FNM issued another press release dealing with the Prime Minister's comments on the certiorari court action against the Disclosure Commission. Not a single word of this was carried by ZNS."

The statement continued:

"Dr David Sands this week

launched a national appeal for funds to assist the FNM in its court costs. ZNS was invited to the press conference announcing the appeal, but up to now has carried not a single word."

"On Monday BCPOU President Keith Archer, in a speech at the union's convention, responded to an attack on the union by the Prime Minister. ZNS up to now has carried only that part of Mr Archer's address which admitted financial irregularities in the union. Nothing about the telling points scored by Mr Archer."

The FNM congratulated Mr Archer "for facing up squarely to the union's difficulties and for his courage in responding so clearly and effectively to the Prime Minister's attack."

"In the midst of so much spinelessness by some others in leadership positions, it is good to know that the Bahamas still has sons and daughters who value truth and fairplay, and are prepared to stand up for them," the release said.

"As for ZNS, we call on the government to issue to the management directions to report the news fairly and squarely and in a professional manner. If the present management is incapable of effecting such a policy then that management should be changed without delay."

2 October 1985

## ZNS Rejection of Political Ad

Nassau THE TRIBUNE in English 26 Jul 85 p 1

[Text]

THE BROADCASTING Corporation has refused to accept a paid political announcement by the newly formed Committee for Justice.

The Committee is asking the public for contributions to encourage Opposition leader Kendal Isaacs to appeal his case against the Public Disclosure Commission.

Mr Isaacs, whose application against the Commission in relation to the Prime Minister's disclosures was dismissed by the Chief Justice, has been ordered to pay costs. Although no figure has been set as yet by the court, Mr Isaacs has estimated that this will amount to \$100,000, and that it will cost another \$100,000 to appeal the decision.

A Committee for Justice member took the notice to the Community Announcement section of the Broadcasting Corporation yesterday afternoon. He said he was warned by the woman serving him that the notice might be viewed as a commercial, not a community announcement. He replied that, if that was the case, he was

prepared to pay for a commercial spot.

He said that the deputy sales director, Thelma Deveaux, agreed that there should not be any problem in having the notice aired.

He said that the woman at the Community Announcement counter went to find deputy general manager Lois Hanchell, but that he was not there.

The Committee member said that Thelma Deveaux took the notice and "disappeared" for more than an hour. Her car was

in the parking lot, but neither he nor Mrs Deveaux's secretary could locate her. The member left the Corporation.

When he spoke with Mrs Deaveaux this morning, the Committee member said he was told that the notice had been given to her secretary for him while he was at the Corporation yesterday.

"This is garbage because her secretary helped me look for her yesterday," he said.

He got the notice back this morning.

The Committee member said

he was told, "This cannot be aired. This is a solicitation of funds." He was told that only fundraisers for organizations such as the Red Cross or churches are aired over ZNS.

The member said he was further told, "We have no record that he's (Isaacs) going ahead with appeals proceedings."

Lionel Dorset, a former ZNS news editor who now edits The Torch, the FNM weekly, said, "In the past, there have been numerous solicitations to the public for funds for the Red Cross, for medical expenses and even political party cookouts. If this solicitation is being condemned, then all past solicitations must also be condemned."

Mr Dorset felt it was another "glaring example of ZNS management acting at the behest of the Government towards the FNM."

TV 13, which covered a news conference Monday at which Dr David Sands launched the appeal, has yet to air a word on the matter either on radio or over TV.

Both newspapers featured the story on the front page.

## Fracas at FNM Meeting

Nassau THE TRIBUNE in English 1 Aug 85 p 1

[Article by Athena Damianos]

[Text] The Broadcasting Corporation has threatened to boycott the FNM Torchbearer's Convention following an incident in which ZNS newsman Ed Bethel was struck in the neck last night.

Bethel was hit in a parking lot from behind shortly after a ZNS cameraman and FNM supporter almost came to blows at the convention site in Loews Harbour Cove on Paradise Island.

This morning it appeared that ZNS was seeking to lay the blame on FNM chairman Cecil Wallace-Whitfield.

ZNS, which was broadcasting the convention live, repeatedly interrupted one of the speeches with music, touching off the incident between FNM supporter Derek Simms and George Culmer, a ZNS cameraman.

The Torchbearers Association has paid the Broadcasting Corporation \$3,435 to have their convention aired two hours for each of the three nights. George Wilson, chairman of the FNM Action Group, was saying he believed the PLP was responsible for the drug problem when ZNS began replacing portions of his speech with music.

In an emotional statement read over the 8 am news, Bethel said he was verbally abused "with words often used by drunken sailors" and struck on the left side of his neck from behind by a "coward."

He also made what can be interpreted as a snide remark about FNM MP Arthur Foulkes and his son.

He said that the people who rushed to his aid last night were "great pretenders."

Bethel named a number of people who, he claimed, said "You Ed Bethel is blankety blank next." He said the people whom he identified as "great pretenders," "saved me from the onslaught while others restrained the nit wits." His address was abruptly terminated.

According to Bethel earlier, "Derek Simms allegedly assaulted one of our TV camera crew members."

But Desmond Edwards, a lawyer, said he saw a verbal exchange between Simms and Culmer. Simms was complaining about the interruptions.

"He (Culmer) reached over to pick up something. Later on, someone told me it was an ashtray. At that point, the thing blew up," he said.

He said that Larry Pinder, a bodyguard for the FNM, offered to escort the ZNS newsman outside so that he could cool it."

"He (Culmer) swung his tripod and hit him. I don't think he intended to hit him though," Edwards said.

In the meantime, Simms went outside to "cool off." Edwards said that Culmer approached Simms outside and challenged him.

"Ed came out and, I have to be fair to him, said this shouldn't happen. We all have to live in this country," Edwards said.

He saw a hand strike Bethel on the neck, but he did not see who did it.

"I think the thing that incensed the people who were there were the repeated interruptions by the ZNS. I think it was only because the senior party members were there and out of respect for the leader that it didn't go further," Edwards said.

It has been reported that the hotel switchboard was inundated with telephone calls from as far as Eleuthera by irate TV viewers who wanted to know why Wilson's speech was being interrupted.

Only last week, the Corporation refused to accept a paid announcement by the FNM in connection with a fund raising drive. ZNS in general gives the Opposition very limited coverage, if any, of news events.

ZNS newsman Kirk Smith reported this morning that Bethel and Culmer were "attacked and assaulted" last night.

Said Smith: "ZNS supporters have apparently heeded the call of their chairman Mr Cecil Wallace-Whitfield to become, in his words, more militant. It happened last night, only a night following Whitfield's emotional charge."

ZNS then played a tape of Whitfield's remarks made Tuesday night.

"We have to become more charged, more militant, more determined than ever before," said Whitfield.

"That charge made on Tuesday night at the FNM rally," commented Smith.

"And last night, at the Torchbearers Convention, the chairman's directives were apparently followed. Two members of a six member ZNS team covering the convention last night were attacked and assaulted...Police had to be called by ZNS to collect their equipment," Smith continued.

Torchbearers president Tommy Turnquest told last night's gathering: "We have witnessed tonight a most serious incident with ZNS. I want to tell those of you in radio land, especially in the Family Islands, exactly what happened before the perverted and distorted version (is aired) on radio news tomorrow morning.

"We, as young people, are not violent people, but we are continually pushed and stepped upon until we can take it no more," said Turnquest.

"My brothers and sisters, I've said it before, we are a peaceful people but we will not stand by idly and be trampled upon."

Turnquest received a letter from ZNS General Manager Calsey Johnson this morning, in which he said that two of his employees were abused and physically attacked. Johnson "expected" an apology and asked for a firm undertaking that there would be no repetition of what happened last night. He wanted the Association to guarantee the safety and security of ZNS employees. Johnson wanted Opposition leader Kendal Isaacs to guarantee the conditions.

If the conditions are not met, Johnson threatened to boycott the rest of the Convention.

Turnquest gave his firm undertaking that, provided ZNS newsmen acted responsibly in their coverage, such an incident would not be repeated.

Turnquest said that Johnson investigated the matter and came to the conclusion that the ZNS team were not to be blamed. He said Johnson arrived at his decision only based upon what his employees said.

#### ZNS Boycott of Speech

Nassau THE TRIBUNE in English 2 Aug 85 p 1

[Article by Marcia Bethell]

[Excerpts] Broadcasting Corporation General Manager Calsey Johnson today refused to broadcast FNM National Chairman Cecil Wallace-Whitfield's speech at the Torchbearers Convention live over ZNS radio tonight.

According to Mr Johnson, Mr Whitfield failed to have his speech at ZNS 48 hrs before the scheduled air time. The Torchbearers paid the Broadcasting Corporation (\$3,435) to have their Convention aired two hours on each of the three nights.

Speaking from his home this afternoon Mr Whitfield charged that his speech is not being aired because Prime Minister Pindling does not want to give him the opportunity to reply over the air, to remarks he made at a PLP rally in Freeport on Wednesday night.

Yesterday the Broadcasting Corporation threatened to boycott the Torchbearers Convention following an incident in which newsman Ed Bethel was struck in the neck on Wednesday night while in the parking lot.

ZNS was covering a speech, which the station repeatedly interrupted with music. Several supporters became incensed because of this, which sparked an incident between FNM supporter Derek Simms and George Culmer, a ZNS cameraman.

Last night Pierre Dupuch, MP for Shirlea's speech was interrupted for about 3 minutes with Oriental music.

And ZNS made no mention in its newscasts--7:15 last night and 8 am. today--of Everette Bannister, the Prime Minister's close friend, being charged with perjury in the Magistrate's court. He is charged with making two false statements under oath to the Commission of Inquiry.

--Late this afternoon ZNS informed the Torchbearers that speakers scheduled for 8:40 to 9:20 tonight on their convention programme will be the only ones to be heard by the radio audience. The remainder of the programme--7 pm to 8:10 pm and 9:30 pm to 10 pm will not be broadcast. The latter portion of the programme is devoted to the introduction of party Chairman Cecil Wallace-Whitfield, followed by his closing address to the convention at 9:35 pm.

BEACON Criticism

Nassau THE TRIBUNE in English 12 Aug 85 p 1

[Text]

THE BEACON, published by PLP MP Hubert Ingraham, warned in its third issue that ZNS policies of discrimination and distortion must cease.

Failing this, the Corporation "should be confronted with the strongest possible 'non violent' acts of dissatisfaction," said Mr Ingraham's front page editorial.

The Beacon demanded nothing more than fairness and a hope that decency will prevail and that the Corporation takes its responsibility to the public seriously.

Deploing the assault upon newsman Ed Bethel at the recent Torchbearers Convention and the use of violence under any circumstance, the Beacon nevertheless viewed the incident as "an outgrowth of citizens' anger and frustration resulting from the distortions and outright lies which are broadcast on our airways with unashamed frequency."

"The fact that ZNS station manager Mr Calsey Johnson receives direct political instructions contributes to the problem," the Beacon said.

CSO: 3298/982

BOLIVIA

BRIEFS

TELECOMMUNICATIONS, POST OFFICE DIRECTORS--Engineer Humberto Murguia and Dr Wilfredo Cossio were sworn in this morning as manager of the National Telecommunications Enterprise and director of the Post Office, respectively.  
[Summary] [La Paz Radio Illimani Network 1700 GMT 11 Sep 85 PY]

CSO: 5500/2109

BRAZIL

ITAMARATY RESPONDS TO U.S. DECISION ON COMPUTERS

PY090243 Rio de Janeiro O GLOBO in Portuguese 8 Sep 85 p 32

["Text" of Itamaraty communique responding to U.S. decision on Brazil's computer market -- date not given]

[Text] Pursuant to the official communication from the U.S. Government regarding the decision to open an investigation of the Brazilian computer sector under Section 301 of the Trade Act:

1. The Brazilian Government deeply regrets the U.S. Government decision regarding the Brazilian computer sector policy.
2. The application of the national legislation regarding the computer sector serves the national interests in matters of economic and technological development, and is not intended to represent an unacceptable commercial practice as fully explained by our government to the General Agreement on Tariffs and Trade.
3. The Brazilian Government is confident that in the investigation of this matter, the U.S. Government will keep in mind the broadest interest of bilateral relations which have always prevailed over circumstantial commercial differences, and it does not understand the position the U.S. Government has now adopted at a time when Brazil is undertaking an intense effort to expand its international trade and stabilize its internal economy.

CSO: 5500/2108

BRAZIL

## MARKET RESERVE POLICY TO BE REVOKED FOR 50 PRODUCTS

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 13 Aug 85 p 39

[Text] The market reserve policy for informatics, which also affects other sectors, will be revoked within the next few weeks for some 50 electronic products whose manufacture is now strictly controlled by the Special Secretariat for Informatics (SEI). The first listing, containing 24 items such as video-cassette recorders and microwave ovens, was given yesterday by the SEI secretary, Professor Doria Porto, to Amazonas State Deputies Arthur Virgilio Netto and Carlos Alberto de Carli and Amazonas State Planning Secretary Mario Sussmann.

According to discussions between Porto and the deputies from Amazonas, SEI will release the second listing, containing more items, on Friday. According to Arthur Virgilio, out of a total of 76 items from which the Manaus Free Trade Zone Administration (SUFRAMA) had requested that SEI lift controls, with the understanding that no informatics products would be involved, Porto approved 55 items about three quarters. Lifting of SEI controls qualifies these products for regional tax incentives, such as those offered by SUFRAMA.

"Controversy over SUFRAMA incentives left Amazonas businessmen now knowing where to invest or how to plan," Arthur Virgilio explained. "We decided to give up the whole-package approach and settle for less, beginning with non-informatics products," he continued. In the next few days, SEI and SUFRAMA will sign a joint resolution and release the first lists erasing part of the gray area between informatics and the electronics industry.

In practice, these lists neatly define SEI's authority not only in Manaus, but also throughout Brazil, since only 44 of the 76 products under discussion are now being manufactured in the Free Trade Zone. The 24 items on yesterday's list accounted for U.S. \$2.2 billion in Manaus sales alone in 1984.

Arthur Virgilio and De Carli said that the Amazonas government wants to continue pressing for an informatics center in Manaus even though it cannot offer the incentives available at SUFRAMA.

Some of the items from which controls have been lifted are black-and-white and color TVs; closed circuit television; videocassette recorders; video-cassette camera and recorder units; conventional and pulse-code-modulated audio

recorders and players; AM/FM receivers; audio amplifiers and equalizers; units which play, record, copy disks and/or tapes, equalize and/or amplify audio and/or video signals, clock radios with and without alarms; camera and movie equipment and accessories; air conditioners, freezers and heaters; washing machines, driers, fabric bleachers, dishwashers; microwave ovens; recording tape; household appliances such as mixers, vacuum cleaners, floor polishers and waxers, blenders, fans, etc.; vending machines for coffee, fruit juices, ice cream, cold drinks, magazines and newspapers, cigarettes, candy and snack items; coin-and token-operated Flipperama or arcade-type video games; electronic toys; office automation; safety relays for power generation, transmission and distribution systems; and musical instruments and accessories.

8844

CSO: 5500/2103

BRAZIL

NEWSCAST TO CARRY JUDICIAL BRANCH NEWS

PY222036 Brasilia Domestic Service in Portuguese 2200 GMT 20 Aug 85

[Text] "Voice of Brazil" will once again carry a news segment covering the judicial branch. Reporter Carmencita Couto discussed this issue with the president of the Federal Supreme Court.

[Begin recording] [Couto] Judge, how do you feel about the return of the judicial branch segment to the "Voice of Brazil" program?

[Moreira Alves] This coverage is obviously of extreme importance. We all know that the ability of this program to reach all corners of the national territory will make it the ideal vehicle to carry the major decisions of the country's high courts, especially of the Federal Supreme Court.

[Couto] Do you believe that the presidents of courts who have not voiced their opinions on national events will henceforth do so?

[Moreira Alves] The courts' presidents do not usually speak because, in their capacity as judges, they believe that they should mainly speak [words indistinct]. However, this does not mean that court presidents, the judges in general, are not human beings who have their own opinion. Obviously, they will express these opinions within the limitations imposed by their positions as judges.

[Couto] Some court cases can only be referred to in very technical terms. If the judges could clarify a court case, it will be more understandable. It would be an opportunity to explain them to the people, would it not?

[Moreira Alves] Precisely. For that reason, I am adopting measures, through the court technical adviser's office, for the purpose of making it easier to understand some decisions rendered mainly by the Federal Supreme Court, especially regarding the truthfulness of the information. Many times, not certainly with any bad intentions, but for lack of technical knowledge, some publicized cases are biased. This makes it difficult to understand the facts as they are, and even causes confusion and error.

[Couto] Can the listeners of the "Voice of Brazil" now rest assured that they will understand the news from the judicial branch?

[Moreira Alves] As far as it is humanly possible, my wish is that this will be the case.

[Couto] Judge Moreira Alves said that as long as the news might be of national interest, the judge hearing the case will give the necessary information. And this is the first news: The Federal Supreme Court has ruled that the state must pay the honorarium of lawyers appointed to give technical assistance to low income persons.

From the Federal Supreme Court, Carmencita (Couto) reporting. [end recording]

CSO: 5500/2106

GUYANA

# EMERGENCY TELECOMMUNICATIONS RENOVATION UNDER STUDY

Georgetown GUYANA CHRONICLE in English 14 Aug 85 pp 1, 8

[Article by Trevor Pearson]

[Text] The Guyana Telecommunication Corporation (GTC) will conduct a survey to determine remedial works needed to be carried out on the country's emergency international and national telecommunications network, a GTC official said Monday.

The emergency telecommunications system is used only in periods of national disaster and is not part of the country's regular telecommunications network.

Officials of the GTC and the Civil Defense Commission will meet shortly to discuss measures to improve the system.

Only last month, participants at a workshop on Disaster Preparedness and Emergency Management held at Hotel Tower in Georgetown stressed the need to regularise the system so that there would be total reliability in times of emergency.

During the workshop organised by the Civil Defence Commission in collaboration with the Pan-Caribbean Disaster Prevention Preparedness Project (PCSPPP), course director Lt. Col. Glenn Mignon disclosed that a PCDPFP telecommunications consultant will visit Guyana later this year to look at the system.

The PCDPFP was launched in 1981 after several Caribbean governments requested disaster related technical assistance.

It is being funded by Canada, the United States of America and the European Economic Community and implemented jointly by the United Nations Disaster Relief Organisation (UNDRO), the Pan-American Health Organisation (PAHO), the League of Red Cross Societies and the Caribbean Community (CARICOM).

Canada recently announced that it would provide a grant of \$1,079,500 Canadian to the PCDPFP. The money will be channelled through the Canadian International Development Agency.

The major part of the Canadian grant will be used to upgrade emergency telecommunications systems in Caribbean countries. This phase of the project began in June this year.

JAMAICA

SATELLITE COMMUNICATIONS SYSTEM SLATED FOR MONTEGO BAY

EL021431 Bridgetown CANA in English 2119 GMT 31 Aug 85

[Text] San Juan, Puerto Rico, 31 Aug--Jamaica plans to launch a multi-million dollar satellite communications system in the north coast resort of Montego Bay to lure data-processing companies, CARIBBEAN BUSINESS says.

The government expects to offer the first demonstration of the teleport system in October, instantly linking Jamaica with U.S. telecommunications networks, the paper said in a report.

The system will be the first of its kind in the Caribbean. Teleports are only available today in such industrialized countries as the United States, the United Kingdom and Japan, CARIBBEAN BUSINESS quoted government officials as saying.

It described the teleport venture as a pet project of Prime Minister Edward Seaga and said it is the latest perk aimed to lure foreign investors to establish clean industry in Jamaica's second largest city.

Low-cost labour and tax breaks in the newly opened Montego Bay free export zone have already attracted a U.S. garment company and two U.S. data-processing companies to set up shop there this year.

The Jamaica Government is negotiating for the teleport with an unnamed U.S. satellite company and an unidentified Japanese firm. The U.S. company would provide the communications uplink, while the Japanese firm would provide the downlink and manage Jamaican operations, government officials said.

A joint venture, including U.S., Japanese and Jamaican private investors, is to own the project. The Jamaican Government will invest only if necessary, officials were quoted as saying.

CSO: 5540/52

JAMAICA

# SEAGA ANNOUNCES RESTRUCTURING OF TV, FM SERVICES

FL042002 Bridgetown CANA in English 1835 GMT 4 Sep 85

[Text] Kingston, 4 Sep--Prime Minister Edward Seaga has announced sweeping media policy changes resulting in the restructuring of the state-owned Jamaica Broadcasting Corporation and increased private participation in radio and television services.

In a parliamentary address to the nation, Seaga said the JBC will operate a national FM radio service and television station.

It leases morning television to a private company which will operate from Monday to Friday for about 3 hours daily and the AM radio service to other private interests which will also manage three regional radio stations, two of which were closed last week when over 80 staffers were made redundant.

According to Seaga's statement, the JBC will continue to be responsible for transmission equipment islandwide and may provide news services to the new stations.

Seaga told the House of Representatives of the appointment of a board of governors at the JBC. The government has been under attack for some time following the dismissal of the board last year and the delay in appointing a new one.

Speculation has been rife recently about the future of the corporation, which has always operated at a loss, even with less restraints than its competitor Radio Jamaica (RJR).

A portion of the government's shares in RJR--the largest at 25.1 percent--will be divested quickly, and a new Public Broadcasting Corporation (PBC) will be established, Seaga said.

Seaga also said that all new stations will be required to allow time for state broadcasts by the Jamaica Information Service. The government will hold 25 percent shares in all companies, including those leased by the JBC to private interests.

Seaga said: To avoid a monopoly on public opinion, no entity or individual who already owns or operates existing media outlets will be allowed to buy or control indirectly any of the new companies being created.

An independent media commission, promised in the ruling party's pre-1980 election manifesto, will be established by parliamentary legislation. That body will seek to guarantee proper and fair access to the media by political organisations.

The JBC FM service presently operating on a mainly musical format will begin its new programming by month-end. Other changes are expected soon.

CSO: 5540/52

INDIA

# MINISTER ADVOCATES NATIONAL COMMUNICATIONS POLICY

Bombay THE TIMES OF INDIA in English 4 Aug 85 p 8

[Text] New Delhi, 3 Aug (PTI)--The minister for information and broadcasting, Mr V. N. Gadgil, today strongly advocated for a national communication policy and presented an "oral draft" of it before editors here.

"A national debate should be started on such a policy," he said, addressing the 181st meeting of the All-India Newspaper Editors' Conference (AINEC).

The meeting presided over by Mr Desh Bandhu Gupta, MP, was attended by a large number of editors and owners.

Mr Gadgil said he had already discussed the broad outlines of the policy with the ministers for communication and education who were directly involved in it.

He said the objective of the communication policy should be to strengthen the sovereign, democratic and secular forces in the country.

The minister expressed surprise that no part of the national income had been allocated for the development of media or communication.

The broad parameters of the national communication policy, Mr Gadgil said, would be effect of the technological revolution, role of AIR and TV, people's right to know versus the citizens' right to privacy, the print media, the advertising policy and the language news agency.

The newspaper owners, he said, would have to debate and decide whether to take advantages of the technological revolution taking place in the media sector.

With the help of the latest technology available in Japan, newspaper could print their pages from 15 different places simultaneously.

Talking about the radio and TV, the minister reiterated the government's policy not to give autonomy to the electronic media.

While radio was covering 90 percent of the country's population, the TV's coverage had gone up to 70 percent. Advertisers had, therefore, started realising that by paying Rs. 36,000 for ten seconds, they could convey their message directly to almost the entire rural population.

This could affect the print media because the government thinks that with the help of radio, TV, and the song and drama division, it could convey its message directly to the people.

Mr Gadgil said the government was thinking of making basic changes in the newsprint allocation policy.

The new policy would protect the interests of all newspapers--big and small, he said.

The minister said the policy would take into account the bilateral agreements which the government had with foreign countries for the supply of newsprint.

Mr Gadgil said the policy would also keep in view that Rs. 500 crores had been invested for the development of indigenous newsprint manufacturing capacity.

Mr Gadgil said the government did not want to start a language news agency.

But, it did feel that there must be a language news agency in the country, he added.

The minister said it was shameful that India did not have a viable language news agency though there were so many languages in the country. The two existing Hindi news agencies, he said, could not be saved because they were not viable. Already, Rs. 2 crores had been spent to make them viable, he said.

Therefore, it was for the newspaper owners to decide how to start the language news agency, he said, adding that "but one thing is clear, the government is not interested in coming into the picture."

Mr Gadgil said he had told the newspaper owners that they should pool their resources to start a language agency as was being done in the case of English news agencies.

The owners had set up a committee which had stated that Rs. 3 crores would be needed for starting the initial infrastructure for this agency.

The government's view was that 75 percent of this investment would have to be funded by the owners. But they say the amount should be less.

CSO: 5550/152

INDIA

# MINISTER TELLS OF 'QUANTUM JUMP' IN TELECOMMUNICATIONS

New Delhi PATRIOT in English 30 Aug 85 p 5

[Text] Bangalore, Aug 29--Union Minister of State for Communications Ram Niwas Mirdha today lauded the efforts of young engineers working in the Centre for Development of Telematics (CDOT) here for producing indigenous PABX electronic board capable of handling 128 lines within a record period.

Inaugurating the manufacturers conference organized by CDOT, Mr Mirdha said "this is an unique organisation with a mandate to produce a digital electronic switching system for our telecommunication in just 36 months time which is totally indigenous".

Mr Mirdha announced that during the seventh Plan the country was going to have a quantum jump in the field of telecommunications. He said on the eve of independence the country had only 80,000 telephone lines and the number has gone up to three million by 1985.

However, Mr Mirdha said, we still have to fulfil the demand of nearly nine lakh who are in waiting list. "With whatever funds were given to us for the seventh Plan we will opt for the latest technology to have a quantum jump from cross bar system to straight digital system", he added.

The Minister also declared that the latest transmission technology to connect different centres in the country would also be simultaneously adopted. He said his department has taken some "hard decisions" to find appropriate technology to improve the telecommunications system in the country.

Stressing the need for providing telecommunication facilities to the vast rural areas, the Minister said that the main thrust of the policy would, however, be on "non voice" communications, that is on telegram and telex facilities.

Chairman of the Electronics Commission and former Union Minister Dr Sanjeevi Rao, who presided over the function, termed the achievements as "red letter day" in the history of telecommunications and patted CDOT for "achieving what India had dreamt".

Dr Rao warned that CDOT achievement will not be to the liking of the multinationals "but we have to face the challenge and prove that our country was capable of producing what the multinationals were saying we were not".

Others who spoke at the function were Communications Secretary Thomas Cora and Electronic Commission Secretary Vijayakar.

CSO: 5550/0166

INDIA

## OFFICIALS DISCUSS CUT IN TELECOMMUNICATIONS PLAN

Calcutta THE TELEGRAPH in English 29 Jul 85 p 5

[Article by Tania Midha]

[Text]

New Delhi, July 28: The Seventh Plan period is expected to close with a five-year-long waiting list for telephone connections. Senior officials in the department of telecommunications have admitted here that following the drastic cut in the telecommunications plan from Rs 12,000 crores to Rs 4,000 crores, the department can do little more than meet the present demand. In other words, the demand generated during the coming five years will not be met in this Plan period.

Under the revised calculations after the Planning Commission's axe fell on the telecommunications plan, it is estimated that the total number of new telephone lines during the coming five years will be no more than 10 lakhs. At present, the waiting list for telephone connections stands at 10 lakhs. The estimate of 10 lakh new lines includes the three lakhs expected from the factory being set up at Gonda in collaboration with C.T Alcatel of France.

The main area where the department is contemplating a cut-back on expansion plans is in "voice applications." The officials categorically stated that under the present outlay there will be no further import of telephone exchanges. Areas of non-voice applications, like telexes and telegrams, which they maintain are the "common

man's mode of communication," would not be cut back. The department is planning to make a conscious attempt to popularise the telex as a mode of communication as a substitute for telephones in business establishments.

Regarding the 23 telephone exchanges imported from France, the officials said there had been a delay in the development of the accompanying software.

However, now that the software is ready, they expect to commission an exchange every two to three weeks. So far, the Worli exchange in Bombay and, more recently, the Kanpur exchange have been commissioned.

On the question of cables, the officials feel it is very difficult to think of cable replacement or any major thrust into the field of fibre optics under the present outlay. "We will have to do with our present cable network for the time being," they said.

Admitting that the main problem is resource constraint, they still do not believe that the formation of telephone corporations will make much of a difference. They, however, refused to comment on the issue further as it is under the consideration of the government. But the entry of the private sector in the field of telephone instruments and PABX, they admitted, will make a substantial difference.

CSO: 5550/0159

INDIA

## MINISTER TELLS PLANS FOR DIGITAL EXCHANGES

Bombay THE TIMES OF INDIA in English 8 Aug 85 p 9

[Text]

NEW DELHI, August 7.

**E**IGHT more digital electronic exchanges, with a capacity ranging from 2,000 lines to 10,000 lines, are to be installed during the year in pursuance of the telecom modernisation programme.

The first digital exchange of 10,000 lines is operating at Worli, in Bombay and the second, with a capacity of 5,000 lines, is functioning in Kanpur.

The centres, where the digital exchanges will be set up, are Pathankot, Sriganganagar, Ghatkopar, Wadala II, Marol IV, Ahmedabad and Saifabad.

Giving the information to the parliamentary consultative committee for his ministry, the communications minister, Mr. R. N. Mirdha told the MPs that it has been decided to form a telephone district at Bhopal.

He made it clear, in replying to a query that no compensation is paid for telephones remaining out of order. For the exchange indoor equipment and the outdoor plant remain reserved for the same telephone and the maintenance staff attends to and repairs the fault as early as possible. If a telephone is disconnected on administrative considerations, no rental is charged. For telephones, which are closed for shifting to a different locality and cannot be shifted due to the inability of the department, for want of cable pair or capacity in the exchange, a rebate in rental is granted if the telephone is not shifted within 15 days.

He told the MPs that the recommended plan outlay for the ministry as a whole has been substantially reduced. "We are trying to find ways

and means of stepping up the plan outlay," he said.

As for the postal side, the planning commission had approved only Rs. 295 crores against the minimum requirement of Rs. 610 crores. It is still more than double the outlay for the sixth five-year plan.

In the newly developing areas, where there is a need for postal facilities, the department is unable to open departmental offices due to prohibitive costs. To meet the minimum requirements of the people in these urban and semi-urban areas, a system of licensed postal agents have been introduced. These agents will be doing the work of selling postage stamps and stationery, booking of registered letters and clearing of letter boxes outside their premises. These agents will be compensated by a five per cent commission on sale of stamps and stationery and a fixed payment of 50 paise per registered letter booked.

All precautions have been taken to ensure that as far as the public are concerned, the services of the agents will be available efficiently and that their letters do not suffer delay for being posted in the letter boxes.

He also told the MPs that, India, has become the chairman of the technical committee on postal services of SARC from this month, and the next meeting of the committee will be held in New Delhi in September. He said. The programme of activities for the ensuing year like training courses, seminars, workshops and exchange of experts, will be finalised at this meeting.

CSO: 5550/156

INDIA

# STATES, BUSINESSES MAY FUND DOORDARSHAN TRANSMITTERS

Bombay THE TIMES OF INDIA in English 30 Aug 85 p 15

[Text] New Delhi, August 29--The government has decided to allow state governments, co-operative societies and private companies to set up TV relay transmitters but they are to be used exclusively by Doordarshan.

This apparent change in policy has been dictated by paucity of funds. The minister for information and broadcasting, Mr. V. N. Gadgil, told the Lok Sabha today that the expected allocation of funds for TV expansion under the seventh plan would not be sufficient for all the initially proposed schemes.

In reply to a short-notice question by Mr. Ramakrishna More (Cong), the minister, however, made it clear that such TV relay transmitters, once set up, would become the property of Doordarshan. They would be operated and maintained by Doordarshan, and the programmes to be transmitted would also be decided exclusively by Doordarshan.

## Paucity of Funds

The most blistering criticism of the decision came from another Congress member, Mr. K. K. Tiwari, who asked whether it did not represent a basic change in policy which could proliferate into the core sector like setting up of atomic power plants. The minister replied that he was not competent to say anything about atomic power plants but, as far as TV was concerned, it did not represent a basic change in policy.

Mr. K. P. Unnikrishnan (Cong-S) wanted to know what would be the incentive to be offered to the private companies. Would they be allowed to transmit commercials?

Mr. Gadgil did not directly reply to the question. He repeated the reason for adopting this policy, namely paucity of funds. He also pointed out that the transmitters were to be used exclusively by Doordarsha. The quid pro quo for a private company coming forward to set up a transmitter remained unexplained.

CSO: 5550/0164

INDIA

# TELEMATICS CENTER DEVELOPS ELECTRONIC PABX

Bombay THE TIMES OF INDIA in English 29 Aug 85 p 7

[Text] Bangalore, August 28--The centre for development of telematics (C-DOT) has developed a 128-port-digital electronic PABX.

The C-DOT executive director, Mr. G. B. Meemamsi, told newsmen here today that the indigenous 128 line PABX was scheduled for field trials during the next two months and would be ready for production by December.

Mr. Meemamsi said the trials would give a feedback on the reliability of the design and the quality of components supplied by indigenous vendors, mainly in Bangalore and Bombay.

The union government established C-DOT last August to develop indigenous technology for a family of digital switching systems within three years.

The Rs. 36-crore project focuses on Indian conditions, such as high telephonic traffic and temperature variations. The systems will be simple to design, manufacture and operate.

Mr. Meemamsi said the main purpose was to improve telephone services and usher in a new era in telecommunication.

With the development of telematics, also known as ISDN (integrated service digital network) texts, graphs and images can be transmitted over the public switched telephone network. Then the familiar telephone will give place to the new ISDN terminal, comprising a handset, keypad and visual screen.

Mr. Meemamsi said the first PABX was a by-product of the main project. C-DOT is also developing a special feature phone to fully exploit the novel features offered in the new PABX.

The union minister of state for communications, Mr. Ram Niwas Mirdha, will inaugurate a manufacturers' conference here tomorrow to introduce the new PABX. About 300 representatives of over 150 prospective manufactures will participate.

CSO: 5550/0167

INDIA

## SUPPORT CENTER FOR SATELLITE LAUNCH VEHICLE

Calcutta THE TELEGRAPH in English 28 Aug 85 p 5

[Text]

Trivandrum, Aug. 27 (PTI): A Rs 28-crore major supporting facility for developing the polar satellite launch vehicle (PSLV), is fast nearing completion on the sprawling 80-hectare site at Valiamala, nestling amid picturesque hills, 25 km from here.

The complex is aimed at developing the 260-tonne, 44m high, four stage PSLV rocket for its launch from Shar in 1989, this off-site campus of the Vikram Sarabhai Space Centre (VSSC), Thumba, is set to become fully operational during 1986-87.

The PSLV rocket, which can place an Indian remote sensing type satellite, weighing 1000 kg in a 900-km polar synchronous orbit, has already completed system configuration reviews (SCR) and preliminary design reviews (PDR) and entered the development phase at the VSSC.

Dr V.R.G. Wriker, VSSC director, and Dr S. Sreenivasan, SLV project director, said activities at the site, as also in the other off-site campuses at Mahendragiri and Vattiyoorkavu, catering to new systems development integration and testing, had reached the critical stage of erection, installation and commissioning.

The liquid propulsion centre at Mahendragiri, about 100 km from here in Tamil Nadu, is expected to come up by next year.

Dr G. Wriker said the PSLV programme would be the forerunner of India's own geostationary communications satellite, a 1200 kg unit which would be placed 36,000 km above the Earth within the next seven to eight years.

The goal of the successive improvements over the earlier SLV-3 rocket project was to increase the payload and the orbit in stages, which entails accurate orbit placement.

Dr G. Wriker said the VSSC, with half of its 5500 employees constituting scientists, had moved from the primitive rocketry era of the 1960s to the present multi-stage guided control rockets.

The 125-tonne first-stage solid propellants to be used in the PSLV was the highest energy ever developed by the VSSC. The rocket would be strapped with six solid boosters to enhance the lift-off capability.

For the first time liquid propulsion systems would be used in the second and fourth stage as boosters, Dr Wriker said.

The augmented satellite launch vehicle (ASLV), carrying a payload of 150 kg, which is to be launched by January is an intermediary between the SLV and PSLV rockets.

At the Valiamala complex, the components and sub-systems of launch vehicles designed and developed in VSSC and other centres in the country, will be integrated into major vehicle sub-systems.

After carrying out performance evaluation of sub-assembly and integrated system level tests, the integrated sub-assemblies will be transported to the launch complex being set up at the Sriharikota range.

Nearly 700 scientists would be engaged in project work at the Valiamala complex, which would have a computer link with Thumba, VSSC and Shar.

CSO: 5550/0163

INDIA

## ARTICLE SCORES PLANS TO IMPORT FIBER OPTICS

Bombay THE TIMES OF INDIA in English 4, 5 Aug 85

[4 Aug 85 p 1]

[Article by Praful Bidwai]

[Text]

NEW DELHI, August 3.

THE stage appears set for indiscriminate imports by the government of the new telecommunications transmission technology based on fibre optics, although at least some vital components for its rapid indigenous development are available in the country.

Two public sector companies — the government of India-owned Hindustan Cables Ltd. and the state-government promoted Madhya Pradesh State Electronics Development Corporation — are on the verge of signing umbrella agreements with foreign firms for the wholesale import of fibre optics technology, equipment and systems.

While HCL is going in for a bid Rs. 29-crore project, MPSEDC is planning to set up an even larger Rs. 45-crore facility at Pachmarhi for the manufacture of these new transmission systems under foreign tutelage.

And yet there is reason to believe that the technology they are planning to purchase may go obsolete within a few years.

Thus the proposed deals could result in a waste of crores of rupees that the department of telecommunications (DOT) is planning to invest over the next decade in fibre optics systems which are emerging as an effective substitute for the conventional copper cables that connect telephone and telex lines and exchanges within and between cities today.

Far from aiding the realisation of the enormous potential held out by thin glass fibres on account of their capacity to carry sound signals in the form of light over long distances with little distortion, the wholesale import of technology could hinder it.

The agreements now about to be signed are also liable to put the country in a bind — of an inefficient or obsolete technological trajectory from which it may be impossible to withdraw.

The Union government's departments of electronics and telecommunications and the industries ministry (to whose administrative control HCL is subject) are energetically supporting the proposed fibre optics deals. Meanwhile the views, technical competence and experience, as well as the potential of the public sector Indian Telephone Industries Ltd (ITI) and the DOT's own telecommunications research centre (TRC) are being ignored.

### IDLE CAPACITY

Strangely enough, even the Council of Scientific and Industrial Research (CSIR) is also in favour of wholesale technology imports even though two of its own institutions — the Central Scientific Instruments Organisation (CSIO), Chandigarh, and the Central Glass and Ceramics Research Institute (CGCRI), Calcutta — have been involved in the process of development of and familiarisation with fibre optics techniques.

Ironically, the foreign collaboration agreements are being sought to be pushed through although DOT's existing transmission capacity remains underutilised, there is no urgent need for large-scale imports, and just when the seventh plan investment in telecommunications has been slashed by the planning commission from the original level of nearly Rs. 13,000 crores to Rs. 4,800 crores.

As a result of this cut, the plan outlay for fibre optics systems is likely to be slashed by about two-thirds of the original proposal for over 15,000 route kilometres (of fibre cables).

It is equally significant that neither HCL nor MPSEDC has had the least experience or familiarity with fibre optics. MPSEDC is one of the smallest and most inexperienced of India's state electronics development corporations. It was sought to be roped into the fibre optics project by a former high profile official of the DOE, who was also a lobbyist for the silicon deal which has now been shelved.

HCL is a copper cable manufacturer. It has had collaboration with a U.K. firm, Standard Telephones and Cables (STC), also a cable maker. It is keen to tie itself with the British firm for optical fibres too.

Both have floated tenders for technology imports. HCL opened the bid documents two weeks ago. MPSEDC opened them at the beginning of June and may sign a foreign collaboration agreement with a Japanese firm any day now.

The framework for the agreements, as translated into the tender documents, envisages comprehensive and total collaboration on each of the two major segments of the fibre optics transmission technology: the making of fibre cables, which carry electric signals in the form of light waves; and the electronics assemblies which convert the sound (e.g. from a telephone mouthpiece) into digital signals, then (by means of a laser) into light waves that are transmitted, and back into digital signals and finally into sound or mechanical motion (that drives the keyboard of a telex or teleprinter machines). The electronics assemblies include connectors, detectors, repeaters, and diode-based circuitry, besides lasers.

### STRANGE LOGIC

The protagonists of the blanket agreements have no explanation as to how a single concern can be expected to handle both these components: the two have nothing in common and are treated separately everywhere in the world, where fibre cable manufacturers are distinct from and unrelated to makers of the electronics assemblies.

The protagonists' argument is simply that it is possibly and indefinitely cheaper to import the technology rather than develop it indigenously, and also that the existing technologies on sale in the world market are probably more reliable than what Indian designers, developers or manufacturers can immediately make.

"We are only concerned with costs, efficiency and correspondent. After all, the public expects a high and reliable performance from the telecommunications network. We cannot be bothered about self-reliance and indigenisation."

The opponents of the view favouring umbrella agreements contend that there is a proven capacity in the country — specifically in ITI and TRC — to make the complete electronics part of the transmission system.

Indeed, neither ITI nor TRC is new to the fibre optics field. Ever since the country installed its first experimental fibre optics system in Pune in 1979, they have familiarised themselves with the design and assembly of the electronics component. They have mastered a whole range of stages in the technology.

From the first 8-megabit (millions of binary units, the measure used in informatics — eight bits usually make one written word) cable with a capacity of 125 voice channels, they have gone into the next higher level — a 34-megabit system.

A prototype of the indigenously designed 34-megabit system is now ready and will soon go into field trials. While the lasers and of course the optical fibre cables are imported, most of the remaining components are of domestic design and manufacture. ITI has already executed an order for 20 8-megabit systems.

ITI and TRC now propose to go into the next stage, a 140-megabit system. According to an ITI source, the prototype for this is expected to be ready within the next six months.

Meanwhile, the Central Glass and Ceramics Research Institute claims to have successfully made several kilometres of multi-mode optical fibre. This fibre (actually a two-layered glass wire which is hair-thin, the inner core being less than a tenth of a millimetre in diameter and the outer layer less than double that size) is now being tested in the field.

The institute also proposes to make an even finer fibre (called the single-mode fibre, which is excellent for long distance transmission) soon. This fibre is ten times thinner than the multi-mode variety. A pre-form of the single-mode fibre has already been made by the institute.

While CGCRI has undoubtedly a long way to go before it makes fibres on a commercial scale, it is curious that it has not been associated with the HCL and MPSEDC projects in any way.

The way the two public sector units' deals with foreign firms are being pushed through evidently leaves no room whatsoever for the association of any indigenous agency in the future growth of fibre optics transmission technology. ITI and TRC are the worst affected by this exclusion.

ITI claims with some proof that it is fully capable of manufacturing the electronics assemblies needed in fibre optics transmission, and can actually do so at just 15 or 20 per cent above the landed cost of imported equipment. Its repeated protestations are yet to evoke a sympathetic response from the bureaucrats of DOE, DOT and the ministry of industry.

[Text]

NEW DELHI, August 4:

**T**HE most curious feature of the fibre optics collaboration agreements which are about to be signed is that they are likely to saddle Hindustan Cables and MPSEDC with technologies that are obsolescent and scales of production that are uneconomical.

These results are the diametrical opposite of the goals that the supporters of technology imports swear by and cite while promoting their case.

The reasons for this ironical situation are not difficult to understand. First, under the truncated seventh plan, the department of telecommunications is going in for no more than 6,000 to 7,000 route kilometres of fibre cables over five years. This corresponds to a maximum annual rate of production of optical fibres (ten of which usually form a cable) of 14,000 km a year — only a seventh of the initial scale of production considered economical.

Secondly, this also means that HCL will at least for the next five years or longer be prevented from reaching even the fibre making capacity (40,000 km) proposed to be set up under the Rs. 29 crore import deal itself. There is every danger that it will be a sick unit in its very infancy.

Thirdly, the agreement is likely to result in the freezing of the second major (electronic) component of the technology as well, so far as the two public sector units go. This likelihood is all the greater since a number of prominent West European fibre optics firms, other than British ones, have apparently not responded to HCL's tender. This exclusion will leave the Indian cable company with a limited and possibly stagnant set of options in a fast-developing field.

Finally and most importantly, the scope of collaboration is restricted to a generation of optical fibres that is rapidly giving way to a considerably superior one.

The technology to be transferred pertains to a fibre system that uses a maximum wavelength of 1.3 microns, (1.3 millionth of a metre) which has been in use for the past five years or longer. The system that is increasingly displacing it is based on a wavelength of 1.55 microns or more. It was introduced only three years ago and is expected to remain dominant in the nineties as third or fourth generation technology.

The difference between the two is substantial: while the second generation does not go beyond a capacity of 140 megabits per second (or roughly

1,900 channels of voice transmission), the 1.55 micron system goes up to 2,000 megabits. Many 565 megabit system using 1.55 micron wavelengths are now being commercially installed in the West.

The transfer of the 1.3 micron technology is to be accompanied by a sizable commitment of resources (Rs. 70 crores or more) that can only act over the coming years as a sort of groove of technological stagnation.

This is not all. The advantages of going in for a 1.55 micron (mainly single-mode) system are particularly attractive in the Indian context. Such a transmission system has an extremely low level of attenuation (weakening of signals).

As opposed to the drop of 3.69 to 18 dB (decibels) per km of distance traversed in a copper cable, the 1.55 micron fibre cable is marked by an attenuation as low as 0.02 dB per km (0.3 to 0.7 dB in the case of 1.3 micron cables).

This simply means that the new generation fibre cable network will need fewer repeater stations (which boost the signals): only one every 100 to 200 km, as against one every 1.5 to 10 km for coaxial copper cables and every 20 to 30 km in the case of the 1.3 micron optical fibre.

Not only does this save up to a quarter of the investment in telecommunications transmission, it also makes for a far more reliable system that is particularly suited to a country with an erratic electrical grid.

Finally, optical fibres are immune to electro-magnetic disturbances — caused by the proximity of a big source of power, for instance — and can be easily hooked to electricity transmission or distribution pylons and lines; no special cable laying expenses are necessary.

The most attractive feature of fibre optics, however, is the declining tendency of their costs which have dropped by a factor of six in the last three years alone. Today optical fibres are selling for 30 to 40 US cents per metre. They are expected to be available at about 25 cents next year.

At this price, a 10-fibre 140-megabit cable is already superior to a four-core coaxial copper cable, which costs about Rs. 100,000 per km. It will provide nearly twice as many channels as the latter and is likely to present fewer problems as far as operation and maintenance go.

By going in for obsolescent fibre optics technology imports of the umbrella type and for uneconomical scales of output, this country stands to miss out on the real potential of the new transmission system.

An even bigger loss would be the wasting of the competence developed by ITI and TRC in respect of the electronics of fibre optics cables and of the transmission system as a whole. Not only would they be prevented from absorbing the technology and further improving on it; they would also stand to be excluded altogether from its introduction on a commercial scale in the country.

The same would be true of the Central Glass and Ceramics Research Institute which is being denied the opportunity to prove its fibre-making technology before wholesale imports are contracted.

But so keen are dot and doe on the deal that it is being rushed through, although the report of a technical group appointed in 1983 by the Union defence minister to recommend an approach for the indigenous development of competence in fibre optics goes against the substance of the proposed agreement.

The report was submitted some time in 1984 by the group and is apparently gathering dust as a result of the stalemate produced by dot and doe's lobbying on the issue.

The situation is many ways analogous to that which marked the controversial deal over the setting up of a national silicon facility at Baroda in collaboration with the U.S. firm, Hemlock Semiconductors.

There is a major difference, however, besides the absence of a pilot plant as in the case of silicon. This is that the newly set up — C-DOT (Centre for Development of Tele-matics) has achieved a measure of success in developing an indigenous digital switching (exchange) technology. It has offered to produce and instal an electronic PABX (Private Automatic Branch Exchange) for trial in the next few weeks.

The confidence this has generated about the possibility of successful indigenisation is, however, yet to reach the departments of communications and electronics.

(Concluded)

## BRIEFS

OVERSEAS PHONE SERVICE--International telephone service to Niue, Tuvalu, Marshall Islands and the Federated states of Micronesia will be available from September 1, the director-general of overseas communication service said here on Thursday. The telephone tariff per unit of three minutes is Rs. 84 and for each additional minute it is Rs. 28. [Text] [Bombay THE TIMES OF INDIA in English 23 Aug 85 p 5]

CORDLESS TELEPHONES--A supplementary telephone directory for 1985 will be available for public distribution from Friday, Delhi Telecom General Manager Satya Pal said on Thursday in the Capital. All subscribers can have the supplementary directory by presenting the coupon attached to the current directory. The supplementary directory has 400 pages, printed on tissue paper. The latest change of telephone numbers in the press area has been incorporated at the end. Mr Satya Pal said cordless telephones would be introduced for the first time in Delhi from October. Delhi Telephones, he said, had the capacity of 480 sets of mobile telephones, which would cover Ghaziabad and Faridabad along with Delhi. The department had imported equipment for the purpose. [Text] [New Delhi PATRIOT in English 30 Aug 85 p 3]

GURGAON TELEPHONE EXCHANGE--Gurgaon, 18 Aug--The telephone system here entered a new era with the commissioning of a 3,000-line electronic telephone exchange. Union Minister of State for Communications Ram Niwas Mirdha today dedicated the Rs 2.5 crore containerised Holland made electronic exchange to the service of nation and said that the number of telephone exchanges in Haryana, during the last decade, had doubled to the present figure of 194. He emphasised that while the execution and the operation of telecom services was the responsibility of the Central Department of Telecommunications, the beneficiaries were largely the people and the State Governments concerned. He maintained that the State Governments also had a big stake in the expansion of telecom services. Mr Mirdha said there were only 80,000 lines in our country after independence and now we had over 30 lakh lines and the number of exchanges also doubled. He said improvement in the telecom services could be brought about only through modernisation. "We have a programme of modernisation as well as the expansion of the network with the help of general improvement in the telephone service and meeting the demand of people." At present, the working connections are 1,692 and the waiting list shows 1,780 aspirants. An expansion of this exchange by 1,000 lines has also been planned and will be commissioned in about a year's time. [Text] [New Delhi THE HINDUSTAN TIMES in English 19 Aug 85 p 7]

NEW STD SERVICE--(TOINS from Sangli)--The subscriber trunk dialing service between Sangli and Ichalkaranji was commissioned on 1 August. The code number from Sangli to Ichalkaranji is 98 and in the other direction 94. [Text] [Bombay THE TIMES OF INDIA in English 5 Aug 85 p 8]

JORDAN

## REPORT ON NEXT 5-YEAR PLAN PROJECTS

Amman AL-DUSTUR in Arabic 18 Jul 85 p 2

[Article: "The 5-Year Plan Programs for the Communications Organization Include: A Mobile Earth Station for Satellite Links in Emergencies and Picture and Text Transmission by Regular Telephone Networks"]

[Text] Sources in the telecommunications organization have reported that the next 5-year plan for the organization includes projects to improve and expand the earth stations used for satellite links, including the earth station used with the Indian satellite, purchase of a mobile earth station and a great many important technical projects.

The first project includes improvements for the earth station used with the Indian satellite because of the great development that has occurred since the construction of this station 15 years ago. This includes improvements to the primary antenna structure and its dishes.

Further, the plan includes a project to introduce a time-sharing service to the Indian and Atlantic stations, since it is expected that this service will begin in 1989, in addition to opening new channels and lines to reach every country in the world.

Further, the source reported that the authority's projects include purchase of a portable, mobile earth station for use in emergencies, in case of a failure of any of the earth stations. This station will be kept in a safe place and can be moved and set up quickly if necessary.

Also, the plan includes a project to construct stations to observe oscillations. This project includes construction of a permanent station and a number of mobile stations to observe and measure oscillations within the kingdom, in order to limit the possibilities of interference and static. This will help determine repeater sites and all of the design requirements for radio and microwave systems.

The source touched on projects for data transmission, including an electronic directory service, data bank and picture transmission services, personal paging services, a service for public transportation and a national and international switchboard for data transmission. He indicated that the organization, in

regard to consolidating the enormous amount of data in the systems, the numbers of telephones and subscriber transactions and everything that is involved with subscriber service, has introduced computer systems and subordinate systems linked to them in order to provide an electronic directory service for the country and to provide and maintain data for the organization employees in subscriber service departments, to help with telephone transactions and to restore breakdowns.

This project includes providing a computer system for Amman, Irbid and al-Zarqa', and setting up a program to enter all of the data in a routine and continuous manner. This is to improve the country's directory service and to raise the adequacy of service to subscribers dramatically.

The source added that the organization will purchase equipment for transmission of pictures, according to uniform international standards. This service will be sold to subscribers who desire it for an additional annual fee.

The source said that this equipment is able to transmit pictures and various documents over ordinary telephone systems, by joint operation with the telephone service, including international, national and local telephone switchboards.

He said that the project can be implemented easily and quickly, provided that construction is completed for a technical workshop for maintenance and repair of subscriber equipment, since this service is needed by the commercial and industrial sectors as well as the public sector.

The source estimated the initial capacity of this service to be approximately 3,000 instruments. They may be purchased at times scattered over the years of the plan in proportion to the volume of actual public demand.

Then the source spoke about the personal paging service, saying:

This service is currently in use in Jordan within the area of organizations, in a disjointed way with limited geographical coverage. In this area, the plan recommends that a wide-spread, high-capacity national service be built to offer this service to whoever wants it. It is expected that the first stage will have over 10,000 subscribers.

He said: Construction of a special switchboard for this service is necessary, in addition to a radio network which is joined to the current national network. The project includes purchasing equipment of various kinds for subscribers and construction of a maintenance center for the equipment.

The source proceeded to talk about a service for public transportation. Such a service is widely used in a number of nations in the world. It is used by all of the organizations that have multiple transportation vehicles, such as taxis, public transportation vehicles of various kinds and public service vehicles.

He said that this project requires construction of a dispatching center and construction of widely spaced transmitters to cover domestic and foreign roads.

There is a pressing need to introduce this service, because it is known that some public organizations have begun construction of private systems for this purpose in an uneconomic manner that will not offer sufficient geographic coverage.

He added that the initial proposed capacity for this project is 1,000 individual subscribers, which will serve 10,000 different conveyances altogether.

Finally, the source talked about the national switchboard for international data transmission, since the kingdom now has a steadily increasing number of organizations and companies demanding connection of data transmission equipment and computer equipment together by means of data transmission and data bank networks.

He said that the plan recommends construction of a special national and international switchboard with its center in Amman. It is to connect subscribers to it for data transmission by means of the national switchboard. It is to be linked to the international network by means of a special international switchboard and data transmission networks in Europe and America.

He added that construction of this special national network for data transmission might only be completed by projects in the next plan for 1991-1995, when the cost of constructing a network like this will become economical with the popularization of data transmission by fiber optic cables.

He said that the initial proposed capacity for this transmitter is 1,200 national and international outlets, expandable to about 5,000 outlets.

12780

CSO: 5500/4512

SUDAN

AGREEMENT SIGNED ON PANA OPERATION IN KHARTOUM

LD061409 Kuwait KUNA in English 1841 GMT 5 Sep 85

[Text] Khartoum, Sep 5 (KUNA)--An agreement was signed here this evening between the Sudan Government and the Organization of African Unity (OAU) whereby Khartoum will host the East Africa regional pool of Panafrican News Agency (PANA).

The agreement follows a resolution at a meeting last year in Addis Ababa of the African information ministers, to set up five regional pools.

The Khartoum-based East African pool will channel news to and from Sudan, Ethiopia, Kenya, Uganda, Tanzania, Somalia, Djibouti, Madagascar, Seychelles, Comoro Islands and Mauritius.

According to the agreement PANA operation will be completely independent. Its properties will be immuned against any legal procedures except in special cases. The agency premises will not be liable for inspection or confiscation and its equipment will be exempted from custom formalities, the agreement stipulates.

The African agency will be allowed full freedom of communications, use its own transmission codes while senior personnel will enjoy the same treatment extended to diplomats accredited in Sudan, the agreement says.

The Khartoum complex will engage in transmitting and receiving news from all East African countries in addition in photographs, films and voice recordings and all types of satellite communications, the protocol adds.

The accord was signed for the Organization of African Unity by PANA chief executive Dr Ibrahim Daggash who is currently in Khartoum for the purpose, with the Sudan government represented by SUNA director-general Dr al-Tayyib Hajj 'Atiyah.

PANA is a joint venture jointly owned by member states of the Organization of African Unity (OAU) and the agreement will take effect as from today.

CSO: 5500/4611

INTER-AFRICAN AFFAIRS

CONFERENCE ON SATELLITE PROJECT HELD IN DAKAR

Conference Opening

AB291938 Dakar Domestic Service in French 1300 GMT 29 Aug 85

[Excerpt] The first conference of the 12 African countries which signed the draft agreement for the regional African satellite project known as Afsat [African Regional Satellite Telecommunication System] opened in Dakar today. The opening ceremony, which took place at Novotel Hotel, was presided over by the minister of information and telecommunications, Djibo Ka, in the presence of delegates and many guests. Our reporter, Djega Ndour, was also present at the opening ceremony. This meeting is the continuation of the international conference on telecommunications which took place in Arusha in Tanzania in May 1985. The meeting constitutes a historical first step toward materializing the efforts to provide Africa with a regional satellite that will give a decisive impetus to the development of telecommunications in African countries. In this regard, the representative of the International Telecommunications Union said that telecommunications must be considered one of the facilities essential to development, and that efforts must be made to expand satellite telecommunications. In his opening address, Minister Djibo Ka also stressed the significance of telecommunications by saying that the role of telecommunications is more important in developing countries than in industrialized countries since they will help to achieve a better integration in Africa and also a better understanding of the continent politically and economically.

Conference Ends

AB010755 Dakar Domestic Service in French  
2200 GMT 30 Aug 85

[Excerpt] The first meeting of the countries signatory to the Afsat agreement of intent ended late this afternoon at the Novotel Hotel. The closing session was presided over by Information and Telecommunications Minister Djibo Ka. The final document was adopted by the member-countries present. The meeting also adopted the election of the interim Executive Committee. The president comes from Senegal while the vice president comes from Congo.

BOTSWANA

BRIEFS

TELECOMMUNICATION MODERNIZATION PROJECT--Now well under way and expected to be fully completed by December 1986 is the massive modernisation and development programme being undertaken by the Botswana Telecommunications Corporation. The programme aims to entirely replace almost all the country's existing telecommunications equipment with a new and highly-sophisticated computerised digital system, incorporating a nationwide series of microwave radio links. By doubling the subscriber capacity available the system will greatly alleviate present congestion. In addition the system promises greater reliability and an overall improvement in quality. Such systems are already in common use in Europe and the United States but most countries on the African continent still rely on old-style electro-mechanical and analogue switching in conjunction with a series of overhead cables. To assist the Corporation, Barclays Botswana advanced the sum of P10 million for ten years towards the project and contracts were officially exchanged in August 1984. Initial feasibility consultant and project co-ordinator in the U.K.-based firm of Cable and Wireless. Another UK firm, Telephone Cables Ltd., has been contracted to install the urban underground cable system and additional equipment is being supplied by Swedish telecommunications specialists, L M Ericsson. [Text] [Gaborone BOTSWANA GUARDIAN in English 21 Aug 85 p 6]

CSO: 5500/197

CAPE VERDE

BRIEFS

FRENCH AID--France is helping to modernise Cape Verde's national radio service according to official sources reported on May 28. The sources said France's aid to the radio and experimental television services amounted to 13.3m francs in 1984, in addition to the 17.9m francs used in the construction of the Praia earth station for communication by satellite. On his departure from Cape Verde on May 30, the French Cooperation and Development Minister, Christian Nucci, stated that France would soon be sending food aid to the islands. [Text] [Paris AFRICAN DEFENCE JOURNAL in English Aug 85 p 16]

CSO: 5500/189

GABON

BRIEFS

LINK WITH INTELSAT--Libreville, 30 Jul (AFP)--Georges Rawiri, Gabonese first deputy prime minister in charge of transportation, laid the foundation stone of a new two-antenna communications earth station at Menai (near Franceville, about 450 km southeast of Libreville) last weekend. The new station, which will be linked to the satellites of the INTELSAT system in the Atlantic region, has necessitated an investment of about 5 billion CFA francs. It will help to ensure the international telecommunications traffic, and will be used by the domestic network of Gabon. Gabon, it is recalled, has had an earth station, also with two antennas, at Nkoltang (near Libreville) since 1972. [Text] [Paris AFP in French 0915 GMT 30 Jul 85]

CSO: 5500/191

GAMBIA

BRIEFS

TV NETWORK NEWS AGENCY--Banjul, 7 Sep (AFP)--Gambian Information Minister Landing Jallow Sonko told the press yesterday evening that a Gambian television network, a daily newspaper, and a news agency would soon go into production. Mr Sonko, who did not specify the date when the television would go into operation, also specific that it would be installed by a Japanese firm which he did not mention but said would operate this organ of information for 2 years. The minister also announced that Gambia was going to acquire a daily newspaper shortly thanks to a project being financed by UNESCO to the tune of U.S. \$80,000. This project is aimed at converting the government's sole weekly, the GAMBIA NEWS BULLETIN, into a daily. In conclusion, Mr Sonko announced that a Gambian news agency would also be established shortly [words indistinct] to be financed also by UNESCO. [Text] [Paris AFP in French 0830 GMT 8 Sep 85 AB]

CSO: 5500/195

IVORY COAST

MINISTER ON CREATION OF SECOND TELEVISION CHANNEL

AB061725 Abidjan FRATERNITE MATIN in French 5 Aug 85 pp 26, 27

[Interview with Ivory Coast Information Minister Amadou Thiam concerning the second television channel; date and place of interview not given]

[Excerpts] [Question] Mr Minister, could we know how this second channel is going to function, and what structuring will it have? And in relation to the first channel, how is it going to perform?

[Thiam] You certainly know for the past 18 months as you have already seen programs on the second channel. First, there is one thing which guides our approach: we would like this channel to cost the Ivorian state as little as possible considering the present economic situation. Its present structuring is extremely light. It will remain so for the meantime. You have noticed that we have no announcers nor journalists. We have simply some studios, a transmitter, and obviously a technician. We are currently running scientific education programs; it is thus a channel with a teaching vocation. We are also running feature films on it. The second vocation of this channel is, therefore, to entertain.

We are going to continue like this for the meantime. You know that we had a project for the construction of a large television station. The economic situation prevented us from carrying this out although all the feasibility studies have been completed and financed. With the few studios we have at Cocody, we cannot establish a complete television channel overnight with all the structures it entails. We are, therefore, going to continue functioning lightly in the same form as at present while increasing the days and hours of broadcast and, as you heard or read, the decree establishing this channel says that its functioning and structures will be defined by ministerial orders from the minister of information.

[Question] In the conception of programs, we cannot clearly see what difference there will be between the first and second channels. And from what you are saying, we understand that it is mainly a mass education and entertainment channel. Is that enough to warrant the creation of a second channel?

[Thiam] We must consider the second channel as a supplement being grafted on to the existing one. It starts its transmission after 2030. Why? This is because we want people to follow the first television programs up to the news bulletin; it is only then that this channel--which is basically a nocturnal one--begins. You want to know the difference between the contents of the two channels? You know that the contents of the first channel is as diversified as possible: political, cultural, funeral reports; in short all the activities of society. That will not be the case with this second channel.

[Question] When will it take off in its new and final form?

[Thiam] From now until 1 month's time, we hope to increase the number of broadcast days to 4 days per week. We have increased its power a hundredfold. We had been using a 1-watt transmitter up until now and we have now installed a 100-watt transmitter on Tower E of the Administrative Center.

[Question] Is the second channel going to cover the Abidjan area only or is it planned to cover the entire national territory?

[Thiam] To begin with, this channel will cover the Abidjan municipality, that is the 10 communes and areas, within a 50 kilometer radius. In the second phase, which certainly depends on when the situation will permit, it will cover the entire Ivory Coast.

CSO: 5500/191

IVORY COAST

BRIEFS

FRENCH LOAN FOR TRANSMITTER--Yesterday afternoon at the Ministry of Finance and Economy, a 1.8 billion CFA franc loan agreement was signed between our country and a consortium of French banks led by Parisbas. The agreement covers the supply, installation, adjustment, and maintenance of a new 500 kilowatt transmitter at Bingerville. [Excerpt] [Abidjan Domestic Service in French 0745 GMT 8 Aug 85]

CSO: 5500/191

NIGERIA

BRIEFS

NEW OGUN RADIO STATION--Plans are underway to set up a new radio station in Ogun state. When established, the station will be known as Gateway Radio Station. The state military governor, Brigadier Oladapo Diya, disclosed this to newsmen in Abeokuta. He said that the establishment of the station would offer job opportunities especially for the retrenched workers of the former Radio Nigeria, Abeokuta. The governor has therefore asked the Board of Directors of OGBC-OGTV [Ogun Broadcasting Corporation-Ogun Television] to come up with a realistic budget for the take-off of the station. [Text] [Lagos Domestic Service in English 1500 GMT 13 Jun 85]

CSO: 5500/191

SOUTH AFRICA

BRIEFS

NEW TELEVISION STATION--A new television transmitting station has been erected at Swartruggens in the Western Transvaal and will commence broadcast on Friday. During the first months tests will be conducted and transmissions may be interrupted without warning. [Text] [Johannesburg Television Service in English 1400 GMT 9 Sep 85 MB]

NEW SABC SERVICES--The director general of the SABC, Mr Riaan Eksteen, has announced that the SABC board has approved the names of the two new radio services in English and Afrikaans, which are to be introduced on 1 January next year. The service broadcasting in English will be known as Radio South Africa, and the service broadcasting in Afrikaans will be known as Radio Suid Afrika. [Text] [Johannesburg Domestic Service in English 0500 GMT 7 Sep 85 MB]

CSO: 5500/194

ZIMBABWE

## SIGNIFICANCE OF MAZOWE EARTH SATELLITE STATION

Harare THE HERALD in English 24 Aug 85 p 1

[Text] The process of making an international telephone call through the Mazowe earth satellite station will take as much time as it takes the caller to dial the required number.

The system works as follows: From your telephone a signal goes to the international telephone maintenance centre at the Second Street exchange in Harare. It is then immediately relayed to the international telephone centre in Gweru.

From there it returns to the Second Street exchange, from where it goes to a repeater station at Iron Cap, a few kilometres south of Mazowe. The signal is then beamed to the Mazowe satellite station, which transmits it 36 000 km to Intelsat 5 orbiting over the Atlantic Ocean.

Intelsat 5 beams the signal to another dish antenna in the required country, say, the United States, and through a landline to your caller.

The Mazowe earth satellite station, opened by the Prime Minister, Cde Mugabe, on Thursday, now provides Zimbabwe with direct telephone, television and telex links with Europe, Africa and North America.

The station is dominated by an imposing structure, a dish antenna that can be seen from kilometres away.

The antenna weighs 243 tonnes, stands 36 metres above the ground and is 32 metres in diameter.

The first stage will put Zimbabwe in direct contact with Belgium, France, Britain, West Germany, Italy, Malawi, Canada, the United States and Greece.

The antenna at Mazowe picks up telephone, telex and television signals from an Intelsat satellite orbiting 36 000 km above the Atlantic Ocean.

In return it picks up similar signals from those countries with which it is connected. The Atlantic Intelsat satellite picks up signals from member countries, amplifies them and sends them to receiving stations on earth.

But to receive and send clear signals, the earth satellite antenna must be in direct contact at 180 degrees with the Atlantic satellite. A slight dislocation of the angle will weaken the beacon (line of contact) resulting in poor reception both ways.

The antenna keeps following Intelsat 5 over the Atlantic operated by an automatic system. But it also operates on a memory tracking unit and manual unit which are used only when the automatic system fails.

The buildings below the antenna at Mazowe house complex gadgets that monitor, receive and send signals to and from Zimbabwe.

The buildings, which cost \$2,5 million, were designed and built by Zimbabwean contractors and, according to Cde Mugabe, the actual construction was completed in less than 10 months, "which is a record for the construction of any earth satellite station of this magnitude and complexity," he said.

So far the whole complex has cost Zimbabwe \$12 million provided by Japan under a loan agreement signed between the two countries last year.

A second antenna is planned to link Zimbabwe with another Intelsat over the Indian Ocean.

CSO: 5500/196

FEDERAL REPUBLIC OF GERMANY

SIEMENS DEVELOPS MULTISTANDARD COMPUTER-LINKING SYSTEM

Frankfurt/Main FRANKFURTER ZEITUNG/BLICK DURCH DIE WIRTSCHAFT in German 14 Jun 85 p 7

[Article by Friedrich Oehlerking: "The Connecting Track to International Computer Connections; Siemens Develops Software Turntable"]

[Text] Frankfurt. Video display text or videotex, as it is called internationally, may in principle be an international information and communication medium. But theory and practice diverge widely.

The Conference of European Postal and Telecommunication Administrations (Conference Europeenne des Postes et des Telecommunications--CEPT) originally adopted a videotex standard aimed at bringing about harmonization across borders. But so far it has been introduced in only a few countries, namely in Austria, Switzerland and the Federal Republic of Germany. And here it also underwent no few decisive, though slight, modifications. Other countries, such as Belgium and England, are still on the British Prestel standard. Yet others, such as France with its Antiope standard, are going their own way.

The results are technical differences which prevent uniform videotex representation on the screen as well as a common computer connection agreement. In particular, the latter connection, an obligatory videotex feature, was thereby directly affected on two levels.

For one thing, users in a country could not get information from foreign data banks on domestic screens, unless they did not spare the high costs for appropriate foreign equipment and international telephone calls. For another, system usability was to a large extent closed to users active internationally, for example, multinational business groups. In the past, these organizations were forced to adapt their data for each videotex application expressly to a certain national standard if they wanted to allow decentralized organizational units, such as dealer branches, in various countries direct access to a central data base.

The politicians and postal administrations, by whom these shortcomings were in fact to be eliminated, left a gap in the requirements here, an area into which Siemens AG is now entering. Its Department of Data Systems and Technical Project Support in Foreign Marketing (Siemens Zentrum Perlach, Otto-Hahn-Ring 6, Postfach 83 09 51, 8000 Munich 83) is involved in the development of a so-called "multistandard system," which can assume the role of a "turntable" between the "connecting tracks" of the different national videotex computer connection solutions. For the first time at the Hannover Fair, the development efforts on this, probably the first, international multistandard system were brought to a preliminary completion, which forestalls a substantial part of the political and administrative slowness in implementing an international standard (see "Common Videotex Beneficial to Europe," BLICK DURCH DIE WIRTSCHAFT, 15 November 1984).

The first consideration which led to creation of the multistandard was the necessity of an internationally active software house such as Siemens to reduce to the minimum the costs for personnel, documentation and other expenses generated by the maintenance of software, which is nonuniform and dependent on the country, for the connection of external computers to the individual videotex systems. Based on the connection standard which in the federal republic is centrally established by the Federal Postal and Telecommunications Administration with the national introduction of the uniform higher communication protocol (EHKP), computer connection software was assembled which consists basically of application software in the processing section of the external computer, appropriate data banks and standard user functions such as logical search by certain keywords for sorting out desired concepts or a private electronic mail box system. It will be equally applicable in future in all countries irrespective of language problems that may be encountered.

The turntable, which by using the appropriate adapter in the software now enables the connection between German (CEPT), French (Antiope), Swiss and soon also Austrian (both CEPT) and Belgian (Prestel) videotex, was housed in the program system for data communication and network control (PDN) of the communication part of the external computer.

A by-product, so to speak, of the initial consideration of keeping software maintenance costs as low as possible, is the advantage from now on of being able to offer international users external computer connection with the selection capability of individual national videotex exchanges. This means that users from one country can tap the external videotex computers of Siemens abroad through common commercial user devices and at fetch costs customary in the country.

Also, in event the videotex corridor between the French Teletel System (Antiope standard) and the German videotex (CEPT standard) is established in the fall of this year, as planned by the politicians, and the multistandard system advantages should thereby at least be adjusted downward for the end user, they are still valid for the user side. This is because videotex corridors to the other countries are not in sight, since preference is first being given to domestic, national protocol developments, instead of connecting to protocols already in operation and thereby paving the way for network solutions that cross borders: Users who must provide for not just bilateral, but also multilateral information transfer and to countries other than France and Germany will therefore be unable to get along in the foreseeable future without multistandard solutions.

Meanwhile, on the other hand, corridors such as the French-German gateway will not become absolutely inessential, for the multistandard system such as now offered by Siemens has a major shortcoming: The information stream opened by it which crosses borders flows one way. It goes from a particular videotex system to an external computer, but not vice versa from an external computer into a national videotex system. In other words: From terminals in various countries, one can access an external computer, but not the public exchanges in other countries. The multistandard system can therefore be seen as a prosthesis for international gateways, at least as regards end usage. But it is already usable now and free of political and bureaucratic hurdles and can give a major impetus to international videotex circulation.

8545

CSO: 5500/2848

NORWAY

#### AGENCY EXPECTED TO NEED ADDITIONAL SATELLITE CAPACITY

Oslo AFTENPOSTEN in Norwegian 23 Jul 85 p 15

[Article by Øystein Grue: "Telecommunications Agency Must Lease More Satellite Capacity"]

[Text] In order to have its future needs for communications via satellite covered, the Telecommunications Agency is dependent on bringing about an agreement regarding leasing capacity outside Eutelsat. For there is no more capacity to be gotten in this and the other ECS satellites. According to what AFTENPOSTEN has learned, the Telecommunications Agency has plans to shift the transmission of the two Swedish TV channels from ECS-2, where they have only a short-term contract, to INTELSAT.

The Swedish TV channels will not take up the entire capacity. But the Telecommunications Agency expects that data transmission traffic will increase so that it will be desirable to lease three so-called transponders, or three channels.

"The leasing agreement with Eutelsat expires in November 1987. Today we are leasing two channels in ECS-2 in order to transmit television to Svalbard and the oil installations in the North Sea, in addition to Swedish programs to the same areas and to the country's cable company," Telecommunications Directorate Data Transmission and Satellite Office Chief Engineer Kristen Folkestad relates. "We cannot count on getting to keep the channel we are leasing today in ECS-2, which transmits Norwegian programs, beyond 1987; and these programs, together with national business communications, are being shifted to one channel, while Swedish TV, together with data transmission traffic, will occupy the capacity of both the other two channels the Telecommunications Agency wants to lease."

"Now I have to draw attention to the fact that we have not received the political go signal to lease the three channels in INTELSAT. For the time being the matter is in the negotiation stage," Chief Engineer Folkestad points out.

"That we take three channels in INTELSAT will mean a necessary expansion of our investment budget for the leasing of channels, at somewhere between 150 and

200 million kroner. For this reason, the question must be taken up with the government and perhaps also with the Storting," Kristen Folkestad points out.

"If we cannot get the capacity we are now applying for in INTELSAT, there can be problems with the continuation of the Swedish so-called 'neighbor country TV broadcasts' after November 1987."

[Question] How quickly is a clarification with regard to INTELSAT expected?

[Answer] "Capacity exists in INTELSAT. But we will hardly get a political clarification of the question before almost the turn of the year, and it is the political decision we are waiting for."

"As mentioned, there have been cries for a joint Scandinavian television initiative. And should anything come of this, there can be a question of leasing more capacity than the three channels we are now working to get to lease. It is especially Finnish and Swedish interests which have expressed such a desire."

8985

CSO: 5500/2861

NORWAY

# RECORD-LENGTH FIBER OPTIC CABLE LAID

Oslo AFTENPOSTEN in Norwegian 5 Sep 85 p 56

[Article by Ulf Peter Hellestrøm: "Telecommunications Milestone at Mjøsa: Record-Length Fiber Optic Cable"]

[Text] The Telecommunications Agency on Wednesday started to lay Norway's longest fiber optic cable up to now at the bottom of [Lake] Mjøsa. The cable will run between Gjøvik and Hamar via Tingnes and it will eventually transmit up to 36,000 calls at the same time. "This cable is a milestone in the introduction of fiber optic technology in the ordinary telecommunications network in Norway," Telecommunications Agency Assistant Technical Director Ole Johan Haga tells AFTENPOSTEN.

The cable which is now being laid over Mjøsa runs in two spans. The longest stretches between Gjøvik and Tingnes. Its length is 16.5 kilometers. This fiber optic cable was developed and manufactured by the Standard Telephone and Cable Factory (STK) in Rognan. It is the first of its kind produced in Norway.

The difference between a fiber optic cable and an ordinary coaxial cable or copper cable is first and foremost its weight and size. A fiber optic cable is not much thicker than a pencil. The cable is filled with a handful of very thin fibers. These fibers can handle just as heavy telephone traffic as a traditional meter-thick telecommunications cable. This means that fiber optic cables can be transported, handled and laid far more easily and less expensively than before.

Haga relates that two of the optical fibers in the Mjøsa cable will be used by the Norwegian State Railways, which will use the traffic capacity for its internal communications, while the Telecommunications Agency will use the rest for telephone and data transmission traffic.

"A year ago the Telecommunications Agency made a strategic decision to the effect that the future development of the long-distance network in Norway would take place by means of fiber optic cables. This technology has absolutely become competitive. The cable over Mjøsa will contribute to covering the Telecommunications Agency's need to increase traffic capacity in the area," Haga says.

To begin with, each of the fibers will be prepared to be able to transmit up to 1920 telephone calls at a time, but this capacity can be expanded later so that 36,000 calls are reached.

The Telecommunications Agency has entered into a contract with STK for supplying more fiber optic cables. These fiber optic cables will eventually be put to use in the telecommunications network both in Arendal, Bergen, Bodø, Fredrikstad, Gjøvik, Hamar, Kristiansand, Oslo, Trondheim [as published], Tromsø and Ålesund.

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CSO: 5500/2861

END